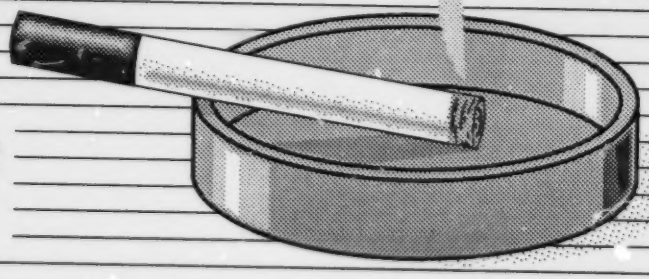
# Smoking Behaviour of Canadians 1986

Canada



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Health Promotion Directorate
Health Services and Promotion Branch
Health and Welfare Canada

# The Smoking Behaviour of Canadians – 1986

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**Symbols**

The following standard symbols are used in this publication:

-- amount too small to be expressed, i.e. sampling variability (coefficient of variation) is greater than 25%.

* high sampling variability (coefficient of variation between 16.5% and 25%); use with caution

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# The Smoking Behaviour of Canadians, 1986

**By W.J. Millar, MA, MSc.**
**Health Promotion Directorate**
**Health Services and Promotion Branch**
**Health and Welfare Canada**

## Introduction

This report presents data from the 1986 Labour Force Smoking Survey. The Department of National Health and Welfare has collected smoking statistics through supplements to the Labour Force Survey (LFS) since 1964. The LFS data base on smoking represents an important source of information about a major public health risk factor. Data from the LFS are used by epidemiologists, health program planners, government and private industry.

## Scope of Report

The report follows the practice of earlier smoking surveys and presents prevalence estimates of smoking by age, sex, education and region. In addition, estimates of cigarette consumption, and the tar nicotine level of cigarettes smoked, provide an indication of the complex set of factors that ultimately influence exposure to the deleterious health risks of smoking.

The 1986 estimates are compared with estimates from earlier surveys to provide some indication of the major trends in smoking behaviour in the last two decades.

The 1986 survey included some additional questions to support the efforts of health promotion program planners. One set of questions relates to the prevalence of smoking in the workplace, and the prevalence of designated smoking areas in the workplace. Another set of questions assesses attitudes toward the restriction of smoking in various public settings.

The discussion of the 1986 survey places findings in the context of recent Canadian studies on the relationship of smoking to public health and in terms of the health promotion implications of the data.

There are a great number of tabulations which could be made on the survey data. Some of them have been placed in Appendix I. These tables are generally consistent with tables in earlier reports. They will be referred to as an additional source of information in the text.

## Highlights

In December 1986, 5.5 million Canadians, an estimated 28% of the population age 15 years and over were regular cigarette smokers. Approximately 3 million men and 2.5 million women or 31% and 26% smoked cigarettes regularly.

Between 1966 and 1986, the prevalence of regular cigarette smoking declined for both men and women. In 1966, 54% of males smoked compared to 31% in 1986. Corresponding rates for women were 32% and 26%. In general, rates among women have declined more slowly.

Since 1966, the province of Quebec has had the highest smoking rates in Canada. In 1986, about one third of the population (34%) were regular smokers compared to 31% in Atlantic region, 28% in Prairie region, 26% in Ontario and 22% in British Columbia.

There is some evidence that regular smokers are smoking more cigarettes per day. In 1966, 11% of male smokers smoked over 25 cigarettes per day, compared to 15% in 1986. Corresponding proportions for women were 4% and 9%.

The prevalence of regular smoking is closely associated with level of education. Adults with secondary level education or less were twice as likely to be smokers than those with a university degree. Among women, persons with some secondary education were three times more likely to be regular smokers than those with a university degree.

In 1986, 19% of regular smokers smoked cigarettes with a tar yield of 1-9 mg, 48% smoked cigarettes with a tar yield of 10-15 mg and 29% smoked cigarettes with a tar yield that exceeded 15 mg. Men were more likely than women to smoke higher tar yield cigarettes.

Between 1977 and 1986, the proportion of smokers who smoked cigarettes with a tar yield of 0-9 mg increased from 9% to 20%.

Since 1977, the proportion of Canadians who smoke handmade cigarettes tends to be older, to be male, and have less formal education. Handmade cigarettes contain higher tar levels.

Fifty-three percent of Canadian workers reported that smoking was permitted in their immediate work area. Workers in the managerial, construction and transportation occupations were most likely to be able to smoke in their immediate work area.

Forty percent of Canadian workers stated that, at their place of work, there were areas that were designated as smoking and non-smoking areas. Professional workers (55%) were most likely to indicate the existence of designated non-smoking and smoking areas.

Canadians generally favour restrictions on tobacco smoke in public settings. The consensus appears to be that smoking should only be permitted in restricted areas or not permitted at all.

Support for smoking restrictions varied according to location of the restriction. Among all respondents, support for a ban was as follows: doctors' offices (80%), inter-city buses (73%), movie theatres (69%), stores (68%), schools (72%), banks (61%), hospitals (58%), airplanes (49%), trains (41%), government offices (35%). The support for a ban was least for restaurants (27%) and the workplace (28%).

## Data Sources

The Labour Force Survey is a large household survey that is conducted by Statistics Canada. It is used primarily to collect data relating to employment status. Because of the large sample size of the Labour Force Survey, it is convenient and relatively inexpensive to add on occasional survey supplements. Smoking surveys have been carried out in Canada through supplements to the Canada Labour Survey since 1964.

The 1986 Labour Force Survey on the smoking behaviour of Canadians was conducted in December. The survey collected data relating to 30 799 adults age 15 and over in 12 000 households. The survey response rate was 95%. Data are collected by a combination of personal interviews, telephone follow-up and mail-back procedures. Proxy response was accepted for 30% of the sample.

Since the inception of the LFS smoking surveys, the conceptual definition of smoking behaviour has remained consistent. The sampling design of the LFS survey has been modified on a periodic basis to increase the efficiency of the design and to incorporate population estimates.

All data presented in this report are from the public use micro-data tape. Because of the relatively large sample size, even small differences are likely to be statistically significant. Because of the number of comparisons which could be made, it was not practical to run significance tests on all comparisons. Where differences are noted and discussed in the results section, these have been assessed by t-tests with a critical value at .05. Appendix II describes the procedure for the calculation of standard errors.

All data from the LFS smoking surveys are based on cross-sectional sample designs. Consequently, the observed association between smoking behaviour and socio-demographic characteristics may be due to differences between birth cohorts, selective survival, differences in period or historical influences or a combination of these factors.

## Smoking Status

### Age and Sex

In December 1986, an estimated 5.5 million Canadians, or 28% of the population 15 years of age and over, were regular cigarette smokers (Fig.1). Occasional cigarette smokers comprised 3% of the population and pure pipe and/or cigar smokers 1.5%. Approximately 3.0 million men and 2.5 million women or 31% and 26%, respectively, smoked cigarettes regularly.

Table 1 presents more detailed data relating to the distribution of the population by smoking status. Below age 25, men and women are equally likely to be regular smokers. About 18% of the 15-19 age group and 32% of the 20-24 age group smoke regularly. Men in the 25-44 age group are slightly more likely to smoke regularly (35%) than women (31%). Sex differences in smoking behaviour are more apparent among those over age 45. In the 45-64 age range, 34% of men and 25% of women are regular smokers. Among adults over age 65, 19% of males and 11% of women smoke regularly.

Non-smokers comprise 67% of the population. Former smokers and those who never smoked fall within this classification. The first group represents 23% of the population and the never smoked category 44%. Because of the historical differences in smoking behaviour among men and women, the former-smoker rate is higher among men (27%) than among women (19%). Among both men and women, the prevalence of former smokers increases with age.

The never-smoked category is important because it provides a crude indicator of social pressures against the onset of smoking. About 44% of the adult population report that they have never smoked. Males are less likely to have never smoked. About 36% of men never smoked compared to 53% of women. Among men, the percentage of adults who never smoked decreases with age. This pattern also occurs among women up to age 45. After age 45, a higher percentage of women are likely to have never smoked. Sixty-eight percent of women age 65 and over have never smoked compared to 24% of the men in that age group.

### Region

Regional variation in Canadian smoking behaviour is still apparent, although differences are diminishing. In December 1986, Quebec had the highest proportion of regular cigarette smokers in Canada. About one third of the population (34%) were regular cigarette smokers compared to 29% in the Atlantic Region, 28% in Prairie Region, 26% in Ontario, and 22% in British Columbia.

Table 2 and Fig. 2 provide data on the prevalence of smoking within each province and region. Among the provinces that comprise Atlantic Region, Prince Edward Island has the lowest smoking prevalence (25%), fol-

lowed by Nova Scotia and New Brunswick ((31%) and Newfoundland (31%). Within the Prairie Region, smoking rates are lowest in Saskatchewan (27%) and Manitoba (27%) and highest in Alberta (29%).

Provincial comparisons of smoking behaviour among males indicate that smoking rates are higher in Quebec and the Atlantic provinces. The rates in these provinces exceed the national average of 31%. Rates in Ontario and the western provinces fall below the national average. With 37%, Quebec has the highest smoking rate for males, while British Columbia has the lowest rate (24%). Smoking rates among women are highest in Quebec (31%) and Nova Scotia (29%), and lowest in Prince Edward Island and British Columbia (20%). Within each province, smoking prevalence is higher among males. Male smoking rates exceed female smoking rates by 3.7 to 11.2 percentage points. If the sex difference in smoking is expressed by the ratio of male/female smokers, the ratio ranges between 1.13 and 1.57. The largest sex difference in smoking behaviour occurs in the provinces of Prince Edward Island and Newfoundland. In Prince Edward Island, male smoking rates exceed female smoking rates by 11.2% and in Newfoundland by 8.4%. The corresponding sex ratios were 1.57 and 1.31. Male/female smoking rates are most similar in the provinces of Saskatchewan and Nova Scotia. Male smoking rates are 3.7 to 4.0 percentage points higher than female rates. The sex ratios were 1.14 and 1.13.

### Education

The prevalence of smoking is closely associated with level of education. Table 3 and Fig. 3 compare the prevalence of regular cigarette smoking between educational categories. Respondents with secondary level education or less were almost twice as likely (31%) to be smokers than those with a university degree (15%). The importance of education is particularly evident among women. Respondents with some secondary education were three times more likely to be regular smokers than women with a university degree. The strong association between education and smoking is observed in every province.

### Occupation

The prevalence of smoking within occupational groups is important for both epidemiological and health promotion program reasons. Smoking may interact in combination with hazardous agents in the work environment in a synergistic manner to create more disease than the sum of the separate exposures.[1] Yields of tar, nicotine and carbon monoxide in the sidestream smoke of Canadian cigarettes are much higher than yields obtained from measurement of mainstream smoke.[2] Non-smoking workers may share the health risks associated with smoking through exposure to second-hand smoke.[3-5] A recent Canadian review of the evidence on the composition of tobacco smoke and on the health hazards of involuntary exposure suggests that there may not be a safe level for exposure.[6]

Table 4 indicates that the highest smoking rates were found among males employed in transportation (42%), mining (40%), construction (39%), other crafts (39%) and fabricating (38%) occupations. Smoking prevalence was lowest in the professional (21%) and managerial occupations (24%) followed by the sales (26%) and outdoor occupational groups (28%). Clerical and service occupations were intermediate in terms of smoking prevalence. About 33% of clerical workers and 32% of service workers were regular smokers. For women age 15 and over, the highest smoking rates are found among employees in the other crafts, service, transportation and clerical occupations but less than women who have never worked. Women employed in professional and outdoor occupations were least likely to smoke.

Comparison of male and female smoking rates by occupation indicate that, in general, male smoking rates are higher in most occupational groups. However, the prevalence of smoking in the managerial and service occupational groups is higher among women. For both men and women, the use of these general occupational categories may conceal much higher smoking rates among specific occupations.

The epidemiological and health promotion importance of smoking prevalence within occupational groups is influenced by a number of factors. Among these are the proportions of all workers who are located in a specific occupational group. Another consideration is the existence of other workplace hazards that may interact with tobacco smoke to create health risks.

Males are predominately located in five occupational groups: managerial (13%), professional (12%), service (11%), fabricating (11%) and construction (11%). Because a relatively small proportion of men work in transportation and clerical occupations, these occupations have little impact on total smoking rates.

Three occupational groups: clerical, service and professional account for 69% of the female work force. Among women, a large proportion of the professional category is comprised of technical support personnel. Because of the concentration of workers in these occupations, smoking prevalence within these groups has a greater impact on the overall prevalence of smoking in the total work force.

Some occupations have a higher prevalence of smoking than would be expected if smokers were distributed according to the proportion of males or females working in that occupation. Although only 6% of males were employed in a clerical occupation, 17% of male smokers were located in this clerical group. There was a similar disproportionate percentage number of smokers among males in the service occupations. About 1% of males were employed in service occupations, while 17% of smokers were located in this occupational category. Among women, a disproportionate percentage of smokers were located in the clerical and service occupations. About 30% of all women worked in a clerical occupation but 32% of women smokers worked in a clerical job. Similarly, 20% of women worked in a service occupation, but 24% of women smokers worked in a service occupation.

## Daily Cigarette Consumption

### Age and Sex

Mortality and morbidity risks vary according to the type of smoking behaviour and the degree of exposure to risk. Current cigarette smokers are at much higher risk for smoking-related illnesses and mortality than former or occasional smokers or those who never smoked. Risk has also been shown to be related to the number of cigarettes smoked per day, the tar/nicotine content of the cigarette, inhalation practices, and the duration of smoking. Information is provided in this report on the frequency of smoking and the tar/nicotine content of cigarettes smoked. The tables are consistent with the tabular presentation in the 1981 and 1983 LFS smoking supplements.

Data on the distribution of regular smokers by number of cigarettes smoked per day in 1986 is presented in Table 5. In 1986, 20% of regular smokers in Canada smoked one to 10 cigarettes per day, 67% smoked 11 to 25 cigarettes per day and 12% smoked over 25 cigarettes per day. The distribution of smokers over the frequency categories has remained stable since 1981. The proportion of Canadian smokers who smoke over 25 cigarettes per day is generally higher than in the United States because packs of 25 until recently were not common in the United States. Recently, some Canadian manufacturers have marketed cigarettes in packs of 30. Widespread sales of packs of 30 might shift the proportion of smokers who smoke over 25 cigarettes a day even higher.[7]

Fig. 4 indicates that in general, males are more likely to smoke over 25 cigarettes a day. About 15% of males smoke over 25 cigarettes per day compared to 9% of females. Among both men and women, the proportion of smokers who smoke over 25 cigarettes per day increases with age. Among males, the highest proportion of smokers who consume over 25 cigarettes per day occurs in the 45-64 age group. Among women, peak frequency of smoking occurs in the 25-44 age group.

### Region

The proportion of regular smokers who smoke over 25 cigarettes per day is also influenced by region and education. Table 6 indicates that the proportion of smokers who smoked over 25 per day was highest in British Columbia (18%) and lowest in Ontario and the Prairie regions (10%). The tendency of British Columbia smokers to smoke more cigarettes per day may be partially attributable to the fact that they are also more likely to smoke lower tar/nicotine cigarettes. In all regions, women tended to smoke fewer cigarettes than men.

### Education

Table 7 indicates that within educational groups, the heaviest smoking occurred among smokers at the extreme ends of the educational continuum. Smokers with 0-8 years of education or a university degree were more likely to smoke over 25 cigarettes per day. The pattern in the total population was primarily due to male smoking behaviour. About 18% of men with 0-8 years of education and 21% of those with a university degree were heavy smokers. Although the frequency of smoking was similar in the two groups, the type of tobacco smoked was different. About 18% of males with 0-8 years of education were smoking 'handmade' cigarettes compared to three percent of males with a university degree. Handmade cigarettes generally have a much higher tar/nicotine content and are also less likely to have a filter.

Among women, the tendency to smoke over 25 cigarettes per day declined with increasing education. In the lowest educational level, 11% of smokers smoked over 25 cigarettes per day compared to seven percent of women in the highest educational category. As with men, women in the lowest educational group were more likely to be smoking handmade cigarettes.

## Tar/Nicotine Content

The 'tar' portion of cigarette smoke probably contains a major proportion of the carcinogenic elements of whole smoke.[8] In this report, tar yield is arbitrarily divided into four major categories, 0-9 mg, 10-15 mg, 16 mg and over, and 'handmade'. The handmade category would imply cigarettes that exceed 16 mg because the fine-cut tobacco sold for roll-your-own cigarettes tends to have a higher tar/nicotine content. The delivery of tar/nicotine would also tend to be greater due to the absence of filters in most handmade cigarettes.

### Age and Sex

Table 8 indicates that in 1986, almost half of regular smokers (48%) chose brands with 10-15 mg tar, and only 20% smoked lower tar varieties (0-9 mg.) In the total population of smokers, there was a tendency with increasing age to smoke higher tar cigarettes. Respondents over age 44 were twice as likely to smoke a higher tar cigarette than smokers in the 15-19 age group. Women smokers (Fig. 5) were more likely to choose a lower tar cigarette. Approximately 16% of men smoked cigarettes with a tar yield of 0-9 mg compared to 24% of women.

### Region

Table 9 and Fig. 6 present data relating to the tar yield of cigarette smoked by region. Smokers in Quebec and Atlantic region were more likely to smoke cigarettes with a tar yield of 16 mg or more. In Ontario and Prairies regions, about 25% of smokers smoked cigarettes with a tar yield of 0-9 mg compared to 13 to 14% of smokers

in Atlantic and Quebec regions. In all regions except Prairies, males were more likely than females to smoke a higher tar cigarette.

### Education

Respondents with 0-8 years of education were twice as likely to smoke higher tar cigarettes than those with a University degree (Table 10). About 26% of the former group smoked cigarettes with a tar yield that exceeded 16 mg, compared to 13% of the university-educated. In all educational groups, women were more likely to smoke lower tar yield cigarettes.

The tendency to smoke lower tar yield cigarettes does not necessarily imply a reduction in exposure to risk as smokers may make compensatory changes in their smoking behaviour (i.e. increasing the number of puffs per cigarette, and increasing the puff volume).[9-12] Compensatory changes in smoking behaviour among smokers of lower tar cigarettes could ultimately produce similar levels of exposure to the hazardous constituents of tobacco as experienced by high-tar-yield cigarette smokers. However, full compensation of dose for cigarettes with lower yields is generally not achieved.[13]

## Smoking in the Workplace

### Prevalence of Smoking in the Immediate Work Area

In 1986, a series of questions were added to the Labour Force Survey smoking supplement to assess the prevalence of smoking at work. Respondents were asked the following question: "Is smoking permitted in your immediate work area (that is, the place where you spend most of your working time)?" The interviewer provided the following examples of occupations and work areas to respondents:

- a bank teller . . . . . at the counter
- a bus driver . . . . . in the bus
- a nurse . . . . . work floor or station
- an office worker . . . . . desk or work station

For persons who worked outdoors, their immediate work area was still defined as the place where they spent most of their day. For example, in the case of self-employed fishermen who smoke on their boats, there are no restrictions imposed. Yet fishermen who work for someone else on a boat may not be allowed to smoke in the engine room, but may be allowed to smoke on other parts of the boat.

As shown in Table 11, 53% of respondents indicate that smoking is permitted in their immediate work area. Smoking is most likely to be permitted in transportation (67%), other crafts (67%), construction (65%),

managerial (65%) and clerical (58%) occupations. Smoking was least likely to be permitted in the professional (34%), mining (43%) and sales and service occupations (49%). The tendency of certain occupations to permit smoking in the immediate work environment should be viewed in the context of the degree of control an employee has over his behaviour, the prevalence of smoking within the occupational group, and social or structural constraints which may operate to diminish the likelihood of smoking. In the case of managers of a small business, they probably have more opportunity to decide what the rules will be with respect to smoking in their immediate work environment. Similarly, with respect to workers in the construction and transportation occupations, smoking rates tend to be high, the work is done outdoors, and the worker may not be interacting with the public on a continuous basis. These conditions would facilitate smoking among workers.

### Designated Smoking Areas

Respondents were also asked the question, "At your place of work, are there areas that are designated as smoking and non-smoking?" This question attempts to measure the degree to which occupational environments place controls on the smoking behaviour of employees. Table 12 presents data relating to the existence of designated smoking areas by occupational group. Only 40% of respondents indicated that there were designated smoking and non-smoking areas at their place of work. The professional (55%) and mining occupations (52%) were most likely to have designated smoking areas. In the case of the latter occupation, the risk of explosions would be an inducement to establish designated areas. The establishment of designated smoking areas was least likely in the outdoor, construction and transportation occupations.

### Attitudes toward Restriction of Smoking in the Workplace

Respondents were also asked their opinion about restriction on smoking in the workplace. Table 13 presents data on the distribution of responses to the question. Fifty-four percent of workers expressed the opinion that smoking should only be permitted in designated areas and 28% thought that smoking should not be permitted at all. Attitudes toward not permitting smoking at all were closely associated with the prevalence of smoking within an occupational group. About 31% of professional workers were supportive of not permitting smoking at all compared to 17% of mining and 18% of transportation workers. In general, there was strong support for placing some restrictions on smoking in the work environment. If respondents who favour permitting smoking in designated areas are combined with those that favour not permitting smoking at all, 82% of the work force support some form of restrictions. As expected, smokers were less likely to support a prohibition of smoking. About 11% of smokers believed that smoking should be prohibited compared to 35% of non-smokers. However, the fact that 11% of smokers favour a prohibition suggests that some smokers may desire environmental constraints on their smoking. For some smokers, it may be easier to quit smoking if the work environment does not facilitate the maintenance of the behaviour.

The workplace environment has enormous potential in improving the health of Canadian workers through the process of facilitating the efforts of employees to quit smoking and eliminating occupational exposure to tobacco smoke.[14-15] One of the major challenges facing health promotion workers is to understand the mechanisms by which workers and management can bring about smoke-free work environments.

## Attitudes toward Restriction of Smoking in Public Settings

The 1986 Labour Force Survey on smoking included a question relating to public opinion about the restriction of smoking in public settings. The question was: "In the following places, do you think smoking should be permitted, only permitted in restricted areas or not permitted at all?" Although proxy responses were accepted for some questions and for some age groups, they were not accepted for this question. Proxy respondents might be expected to know whether, and how much, a person smokes, but could not be expected to know about the attitudes and the work environment of the absent household member. The question was similar to one used by a recent population survey in Ontario.[16]

Table 14 presents the percentage distribution of responses to the question by sex and type of public setting. Among all respondents, the degree of support for a ban was as follows: doctors' offices (80%), inter-city buses (73%), movie theatres (69%), stores (68%), schools (72%), banks (61%), hospitals (58%), airplanes (49%), trains (41%), government offices (35%). The support for a ban was least for restaurants (27%) and the workplace (28%).

Attitudes toward restriction of smoking were, in general, consistent with reported findings.[17] Canadians generally favour restrictions on tobacco smoke in public settings. The consensus appears to be that smoking should only be permitted in restricted areas or not permitted at all. A number of factors affect the extent and acceptability of smoking in public settings. Among them are the historical acceptance of smoking in the setting, the degree to which non-smokers are exposed to involuntary smoking, determined by the facility's size, degree of ventilation, and ease of separating smokers and non-smokers. The degree of inconvenience that smoking restrictions pose to smokers is another factor.[11] The strong support for a ban in doctors' offices is probably related to the small size of waiting rooms, the perception of physician disapproval of smoking, and the association of smoking with illness.

The proportion of Canadians who favour a total ban on smoking on aircraft (49%) appears low. However, one would anticipate that the proportion of adults in the general population who favour a total ban would be lower than observed in samples based on people who fly on aircraft. Attitudes are probably closely linked to the salience of the question to respondents.

Although support for bans in restaurants and in the workplace is lower than anticipated, the majority of respondents favour permitting smoking only in restricted areas. Perhaps the support for a ban is lower in these contexts because of the greater potential for interpersonal conflict. In some work environments, non-smokers may not be aware of the hazards of recirculated respirable smoke particulates. This might decrease support for a ban.

## Changes in Smoking Behaviour, 1966-1986

### Age and Sex

This section of the report reviews some of the major trends in the smoking behaviour of Canadians. Table 15 and Fig. 7 present data on the percentage of regular smokers between 1966 and 1986. In 1966, 54% of males smoked regularly compared to 31% in 1986. Among women, the decline in smoking prevalence is less pronounced. About 37% of women smoked in 1966 compared to 26% in 1986.

Figures 8 and 9 compare the prevalence of regular smoking by age group in 1966 and 1986. Among males, smoking prevalence declined substantially over all age groups. Among women, reductions in smoking prevalence by age group is obvious for only two age groups, 20-24 and 45-64. There has been virtually no change in the 25-44 age group and an increase in smoking prevalence in the over 65 age group. The increase in smoking prevalence in the oldest age group probably reflects a cohort influence. As women who were in their teens during the Second World War enter the 65 and over age group, the prevalence of smoking in the older age group may increase further. The current trend in the smoking behaviour of women has important implications for the future pattern of lung cancer mortality. Recent reports suggest that lung cancer rates for Canadian women have doubled in the past decade and soon may surpass breast cancer as the leading cause of cancer deaths among women.[18-19]

### Region

Figures 10 and 11 present data on the prevalence of regular cigarette smoking among men and women 15 years of age and over, by region, for 1966 and 1986. In all regions, there has been a substantial decline in the prevalence of smoking among men. However, among women, the decline in smoking prevalence is not as apparent. In Quebec and Atlantic regions, in particular, the decrease in the prevalence of smoking has been minimal. In Quebec, 33% of women smoked in 1966 compared to 31% in 1986. Corresponding rates in Atlantic region were 29% and 28%. The greatest reduction in smoking among women occurred in British Columbia where 37% of respondents were smokers in 1966 compared to 20% in 1986.

### Education

Figures 12 and 13 display data relating to the prevalence of regular cigarette smoking by level of education in 1977 and 1986. At all educational levels, among both men and women, the prevalence of regular cigarette smoking decreased. Among males, the largest declines occurred among respondents who had intermediate levels of education. Decreases were in the order of 8 to 10 percentage points. For women with comparable levels of education, the decreases were less pronounced. The decrease in smoking prevalence in the two highest educational categories exceeded the decreases observed for males in those two categories. Within all educational groups, both the largest and smallest declines in smoking rates between 1977 and 1986 occurred among women. Smoking rates among women with a university degree declined by 15% compared to 1% among women with elementary school education.

### Number of Cigarettes Smoked per Day

Fig. 14 presents data relating to the number of cigarettes smoked per day by regular smokers in 1966 and 1986. Among both men and women, the distribution of smokers by frequency has shifted toward the higher consumption categories. In 1966, 11% of males smoked over 25 cigarettes a day compared to 15% in 1986. Corresponding rates for women were 4% and 9%. Table 16 displays the percentage distribution of regular smokers by grouped number of cigarettes smoked daily for the survey years 1966, 1970, 1981 and 1986. In all age/sex specific groups over the time period, the proportion of smokers who reported that they smoked 1 to 10 cigarettes declined up to 1981 and then stabilized. Among both males and females, after age 25, the proportion who indicated that they smoked over 25 cigarettes per day increased again, only up to 1981, and then remained stable. The trend toward heavier smoking rates may reflect a combination of greater cessation rates among lighter smokers, and a tendency of smokers who shift to low-tar cigarettes to maintain their smoking frequency.

### Tar/Nicotine Content, 1977-1986

In recent years, many Canadian smokers have switched to lower tar/nicotine cigarettes. From 1968 to 1981, tar averages of Canadian cigarettes declined from an average of 21.1 mg. to 13.5 mg. The market share of Canadian lower tar brands, arbitrarily defined as brands with nominal deliveries of tar less than or equal to 12 mg, represented 8% of the market in 1973 and 34% in 1981.[20] Table 17 presents data on the distribution of regular smokers over tar yield categories of cigarette brand from 1977 to 1986. Tar yields of cigarettes are continually changing and grouping by relative yield measurements does not necessarily imply differences in either the type or magnitude of their biological effects.

Between 1977 and 1986, the proportion of smokers who smoked cigarettes with a tar yield of 0-9 mg increased from 9% to 20% (Fig.15). The proportion of smokers who smoked handmade cigarettes increased from 7% in

1977 to 9% in 1986. A more detailed examination of the proportion of smokers who smoked cigarettes with a tar yield between 0-9 mg between 1977 and 1986 (data not shown) revealed that in 1977, 4% of all smokers smoked a cigarette with a tar yield of 5 mg or less. By 1986, the proportion increased to 7%. Among males, the proportion increased from 3% in 1977 to 4% in 1986. Corresponding proportions for women were 7% in 1977 and 11% in 1986.

## Discussion of Results

The 1986 survey of the smoking behaviour of Canadians suggests a continuation in the secular decline of smoking rates. The prevalence of smoking is at a historic low for Canada and each of the provinces. Nevertheless, the estimate of regular smokers in 1986 is similar to the estimate of regular smokers in 1966. This is attributable to the increase in the absolute size of the population in the last two decades.

The data relating to the attitudes of Canadians toward smoking in the workplace may signal changes in the social environment that may lead to an acceleration of the decline in smoking in the future. A number of Canadian companies and corporations have already introduced or made considerable movement toward smoke-free workplaces. These include such diverse employers as Boeing Canada, the Toronto Globe and Mail, the Kingston Whig Standard, the Montreal Gazette, British Columbia Hydro, Bata Shoes, Canadian Hockey Industries, Bell Northern Research and Maritime Telephone and Telegraph. The City of Toronto has recently introduced a smoking in a public setting bylaw that is one of the most stringent in North America.

Even limited restrictions on smoking in the workplace can reduce the prevalence of smoking among employees and reduce the daily consumption of cigarettes by those employees who continue to smoke. The level of exposure of all employees to respirable suspended particulates is also diminished by workplace smoking restrictions.[21]

The federal government has introduced a ban on smoking in all workplaces except for designated smoking areas until January 1989. At that time, smoking will be banned completely in all federal public service settings. This workplace smoking policy will affect over 200 000 public servants.

The data relating to the issue of smoking in public settings also support the view that smoking is viewed by Canadians as a public health risk to both smokers and non-smokers who are exposed to cigarette smoke. The majority of Canadians favour more restrictive policies regarding smoking in public settings.

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Figure 1

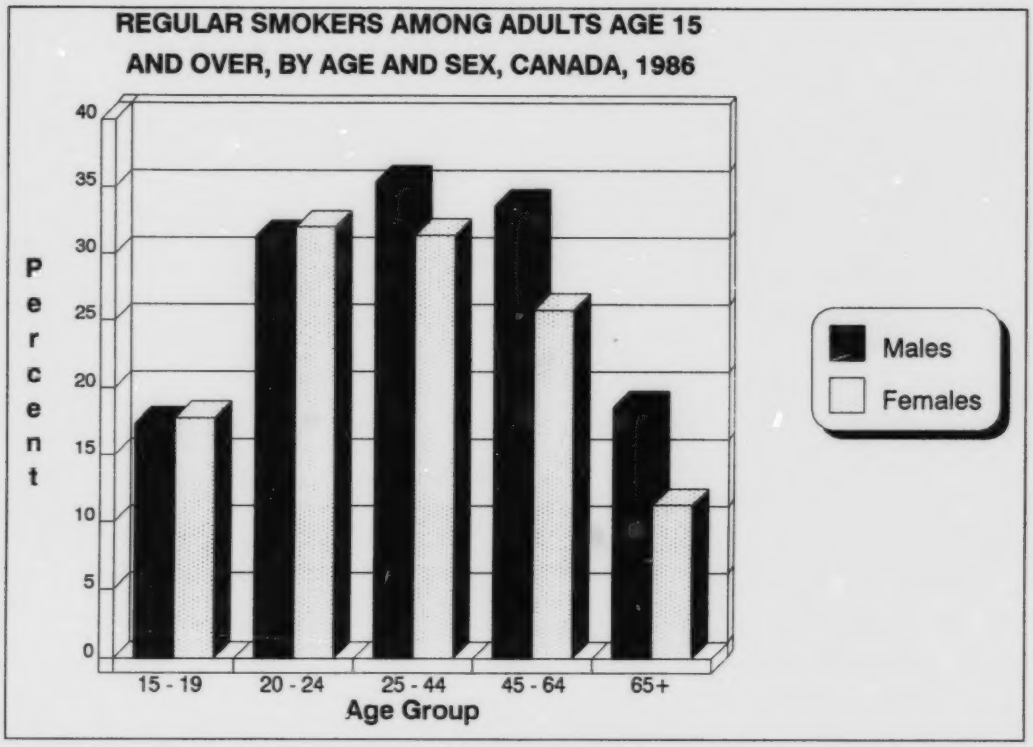



Figure 2

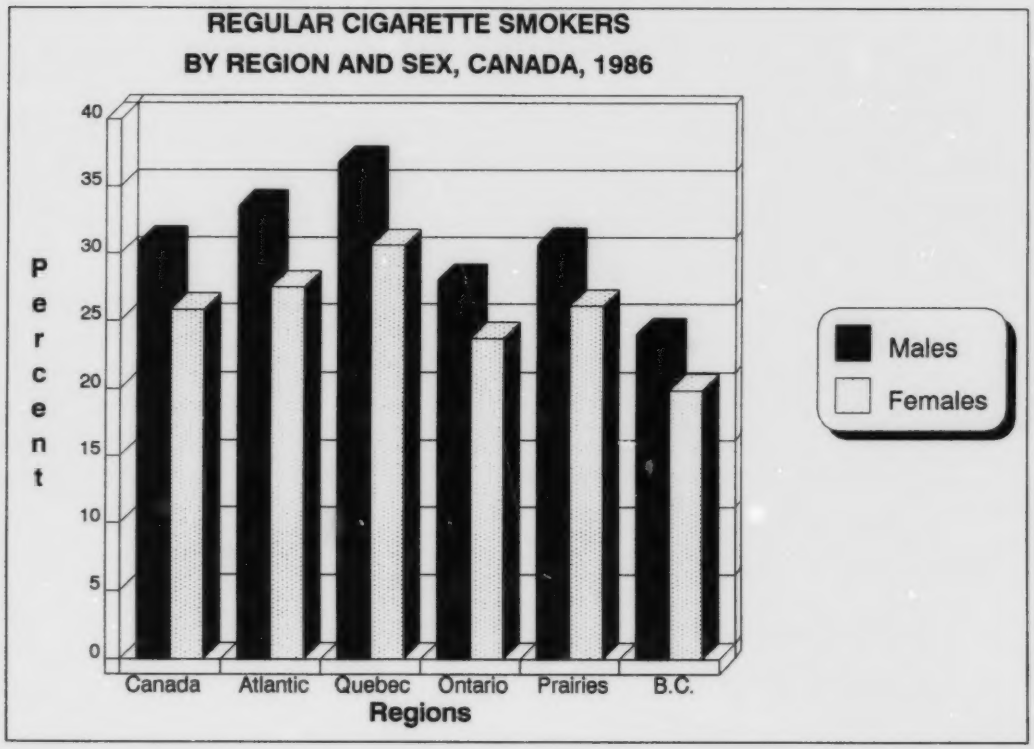
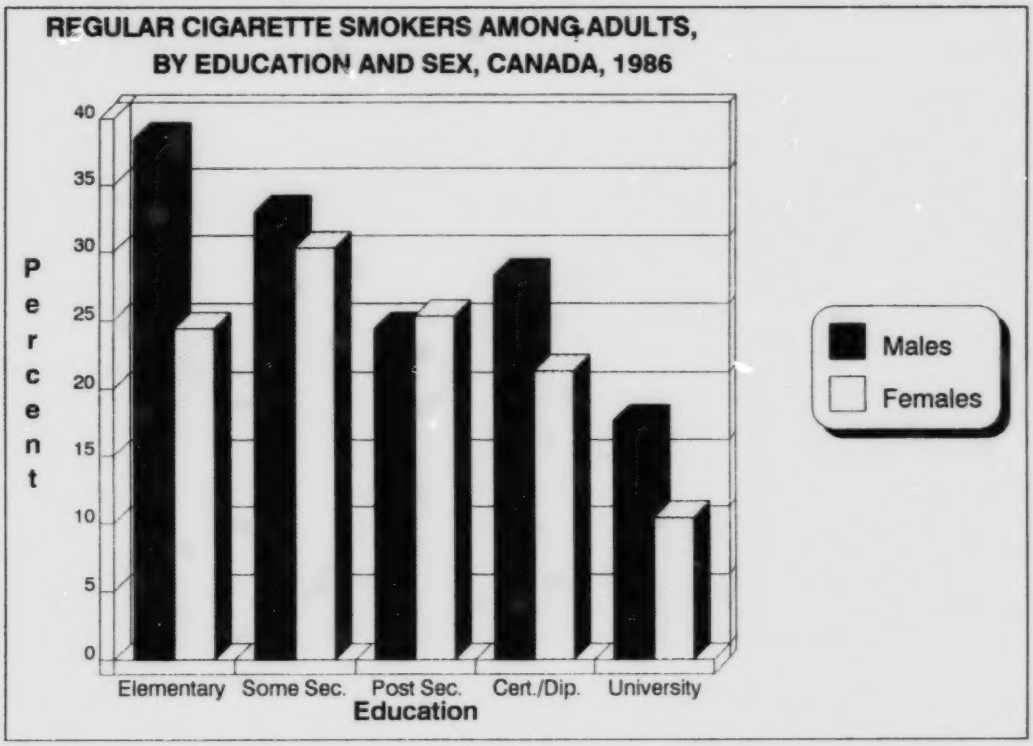


Figure 3

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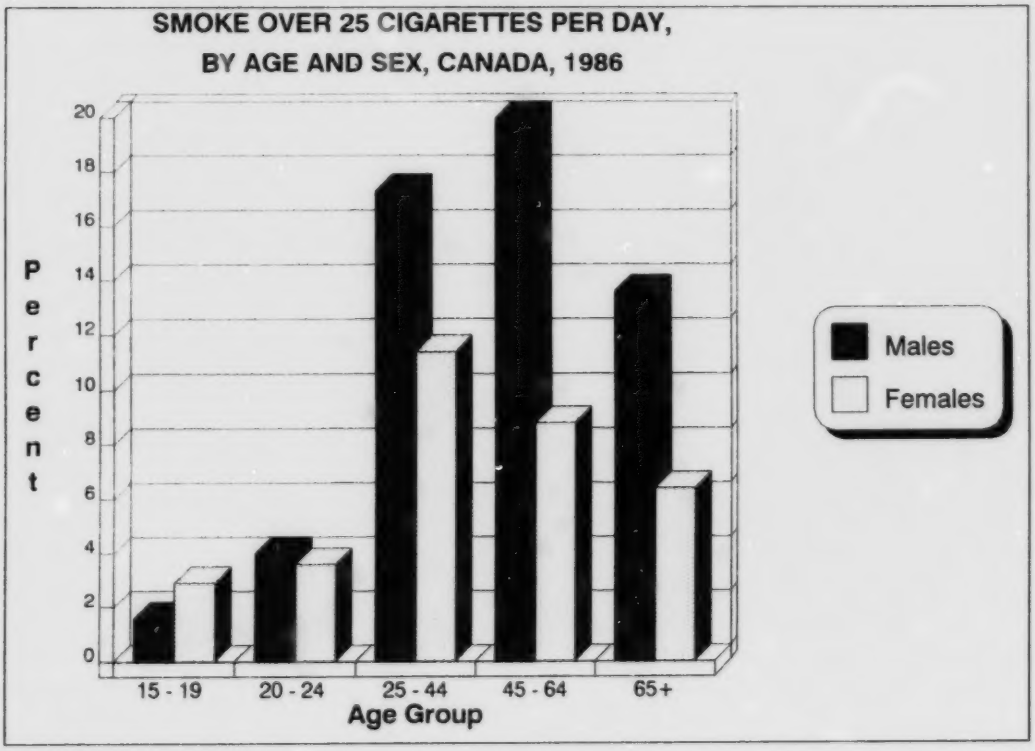

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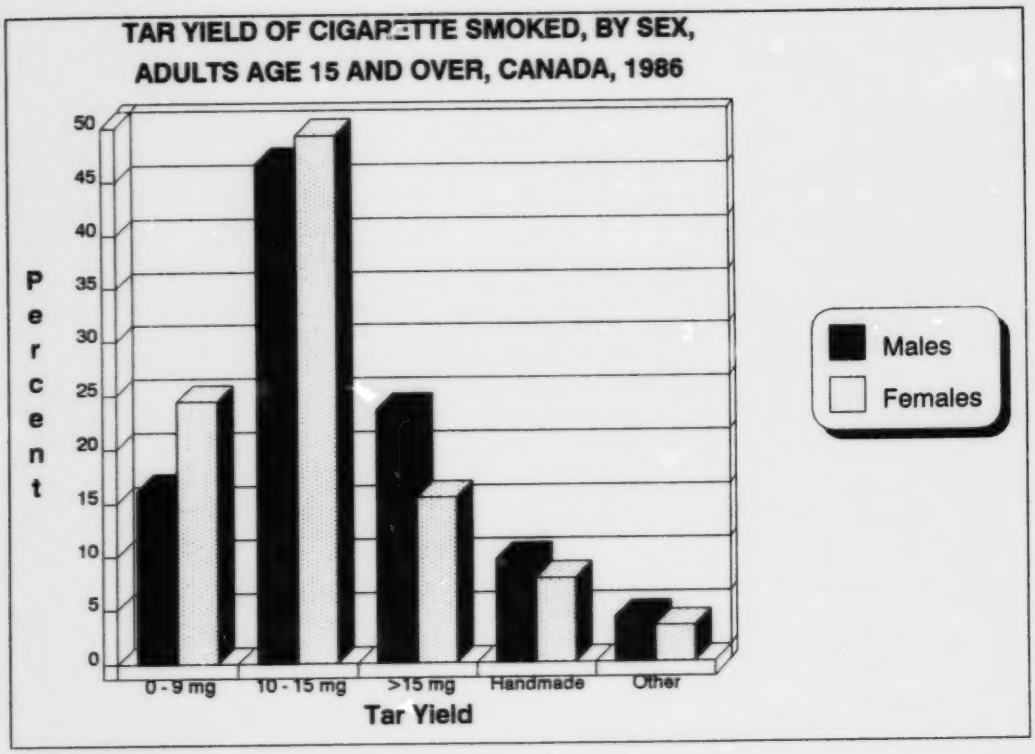


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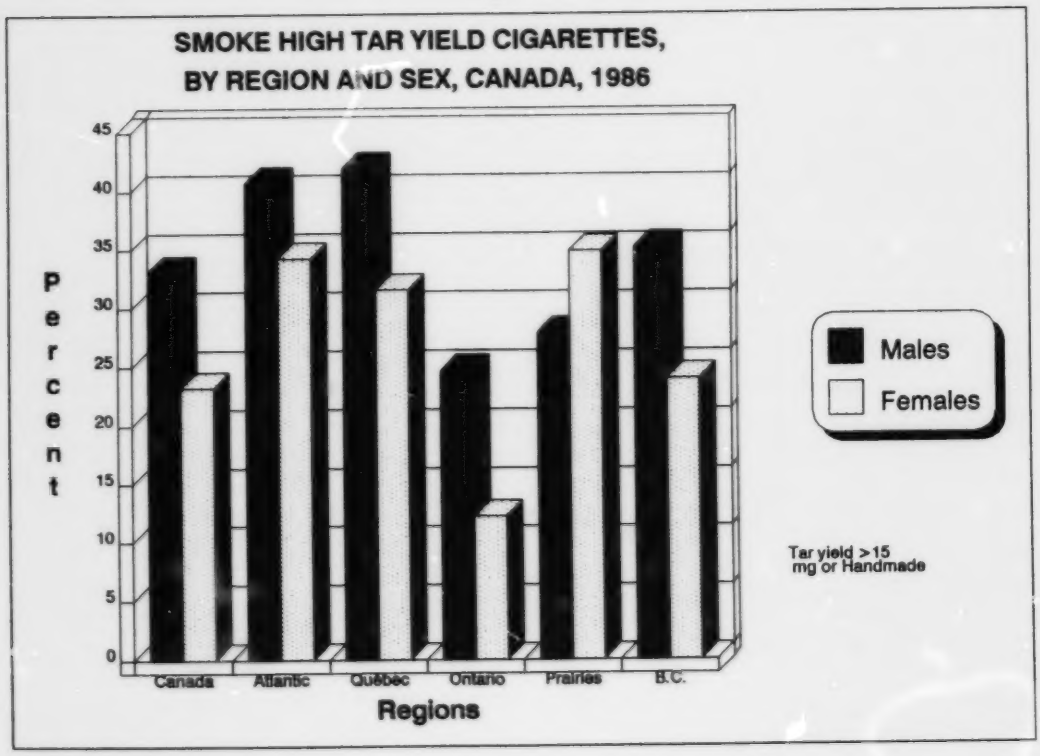
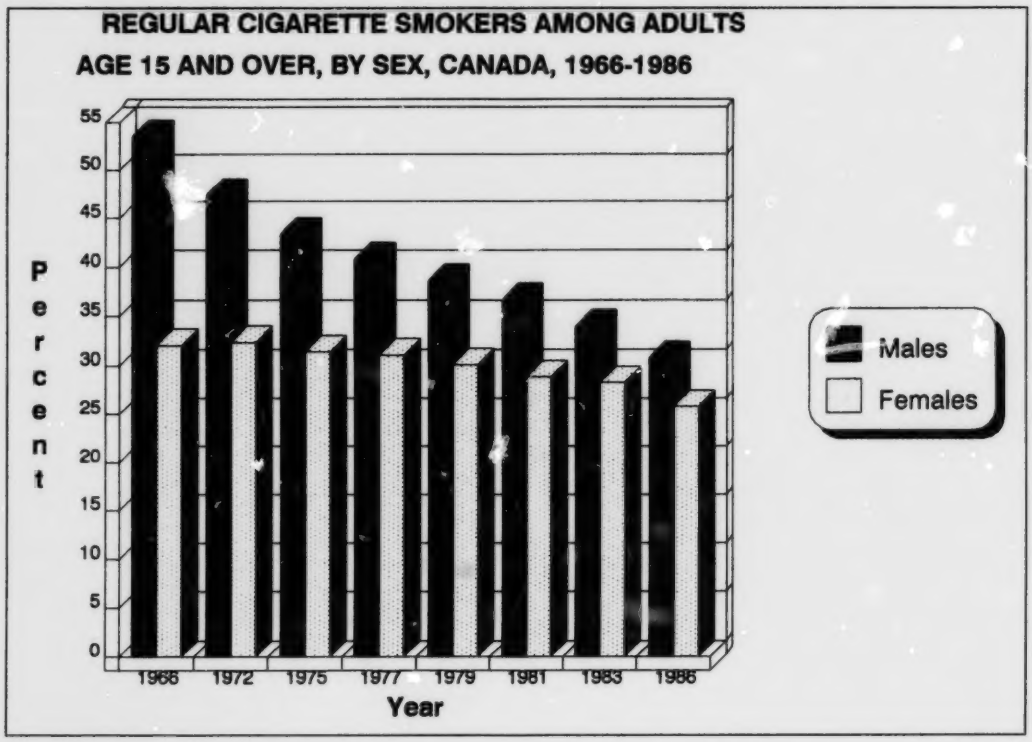


Figure 7

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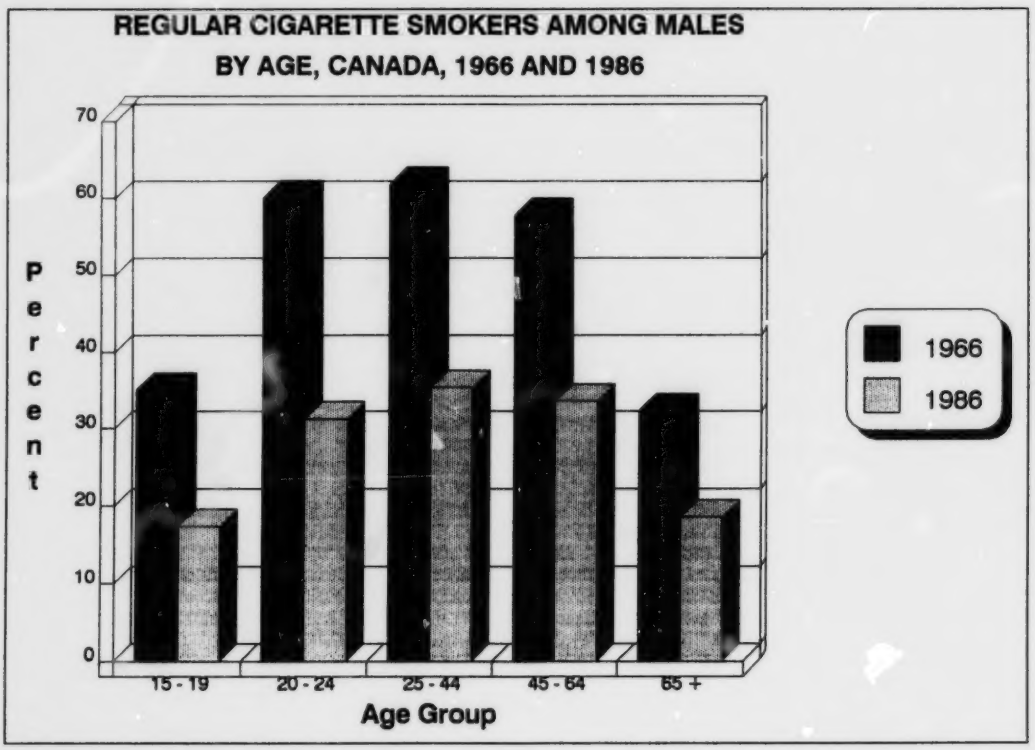

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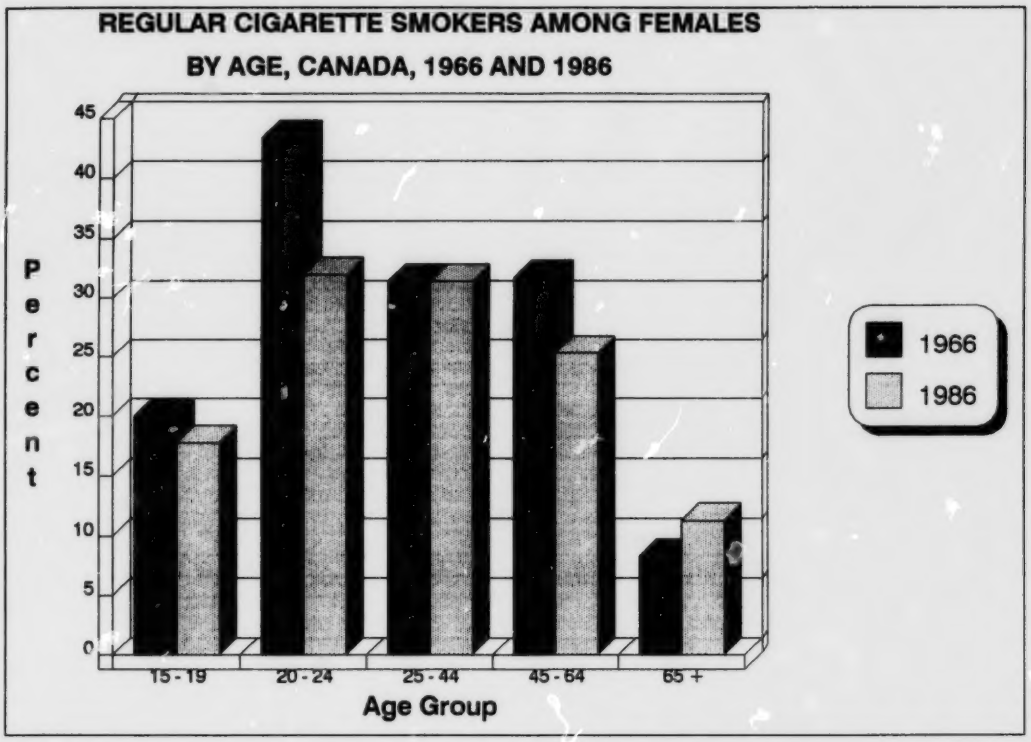



Figure 10

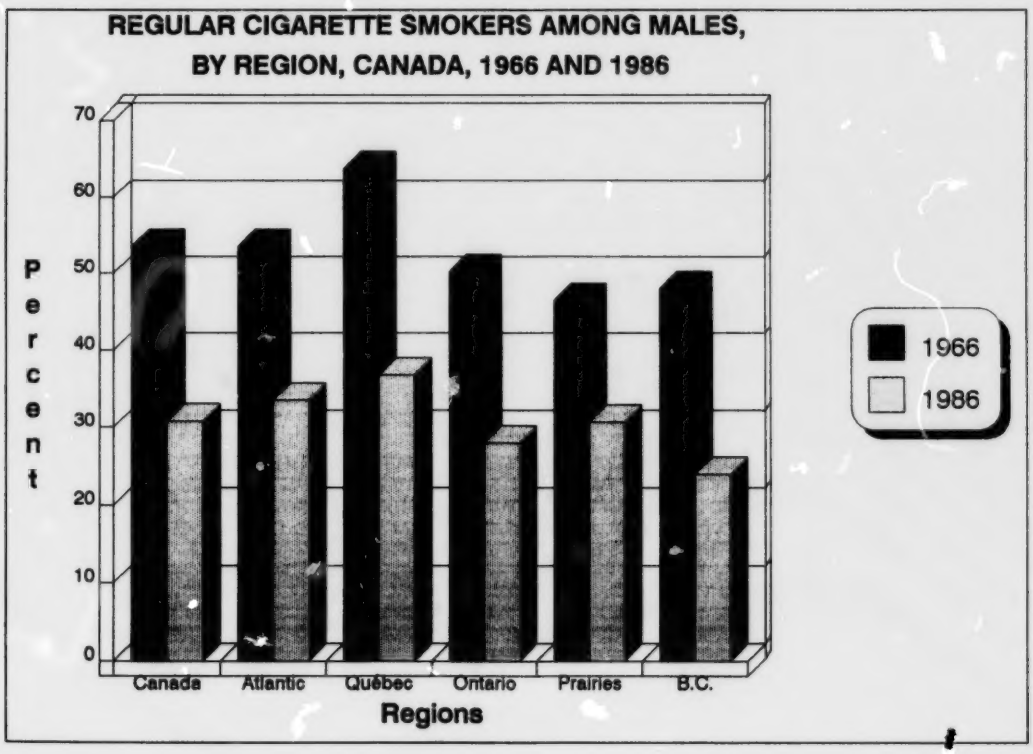


Figure 11

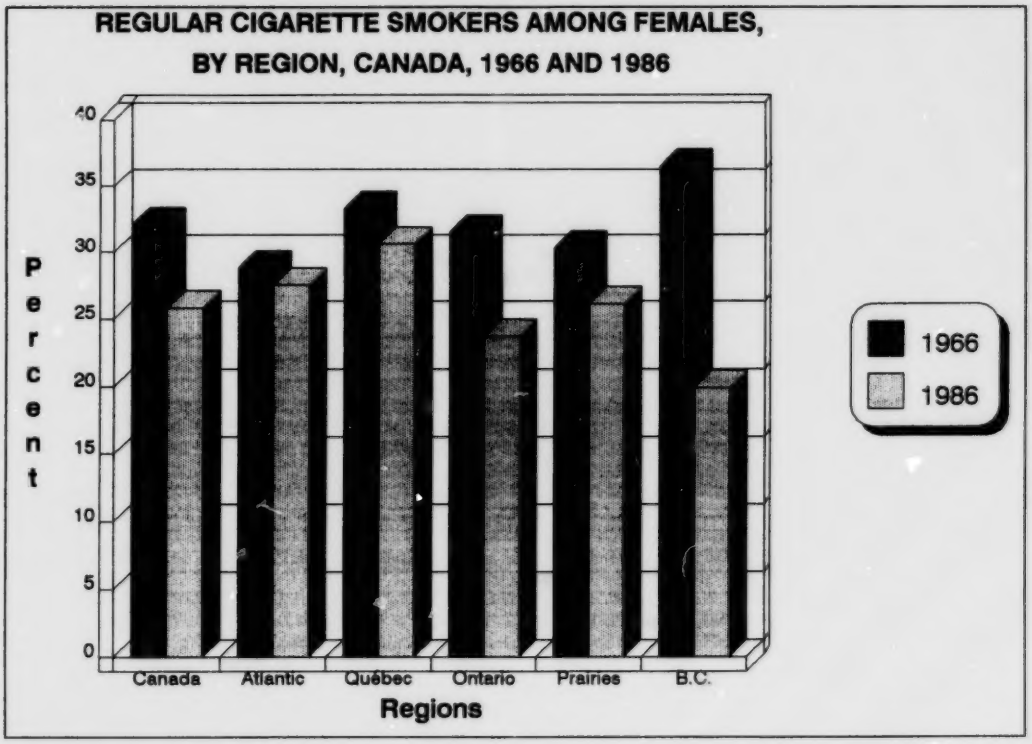



Figure 12

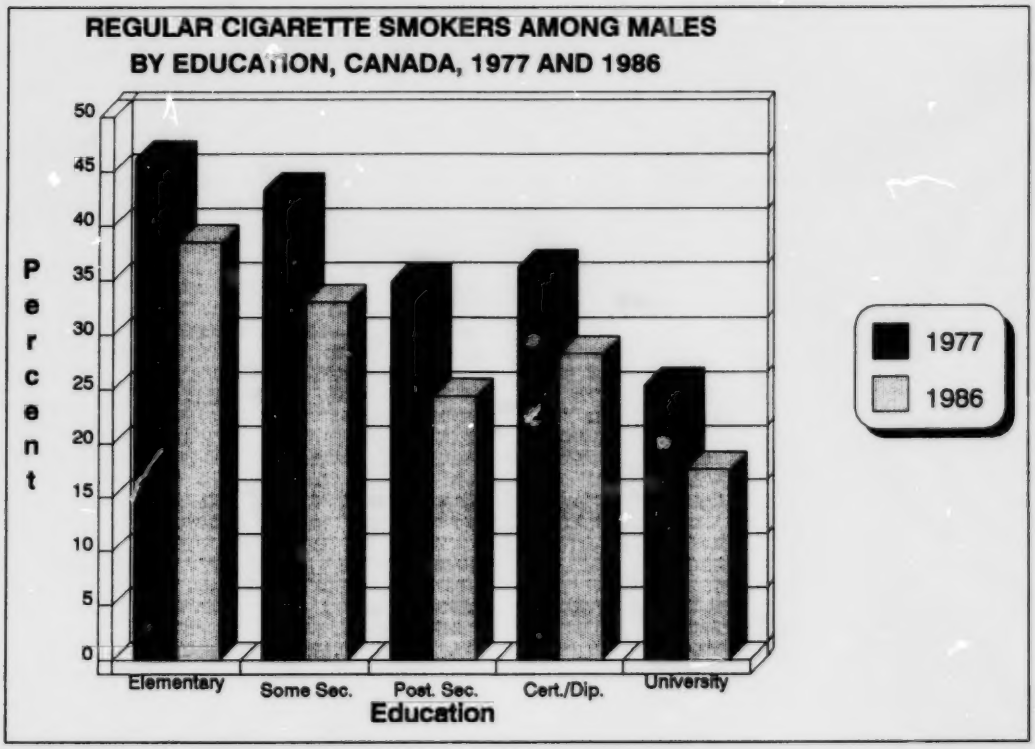


Figure 13

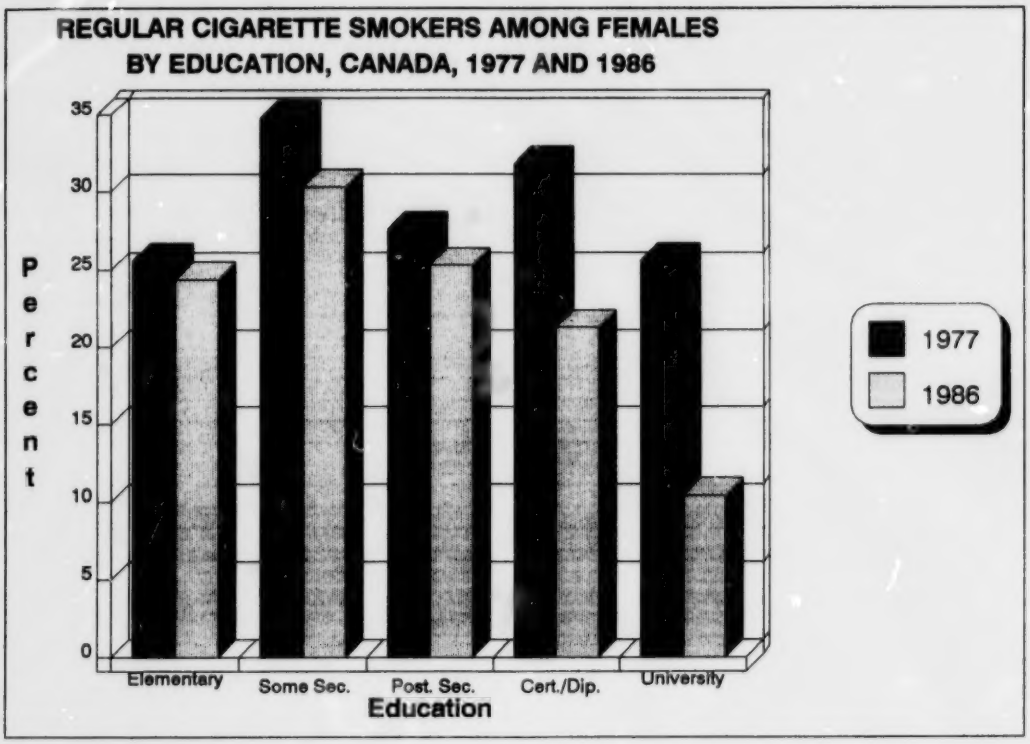



Figure 14

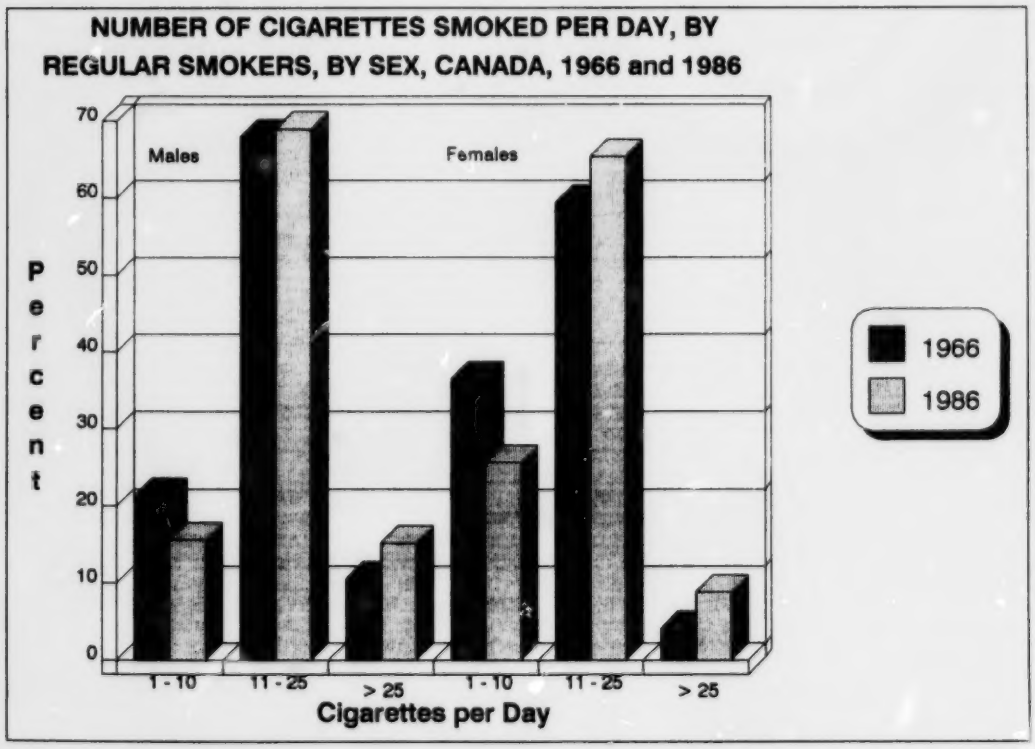
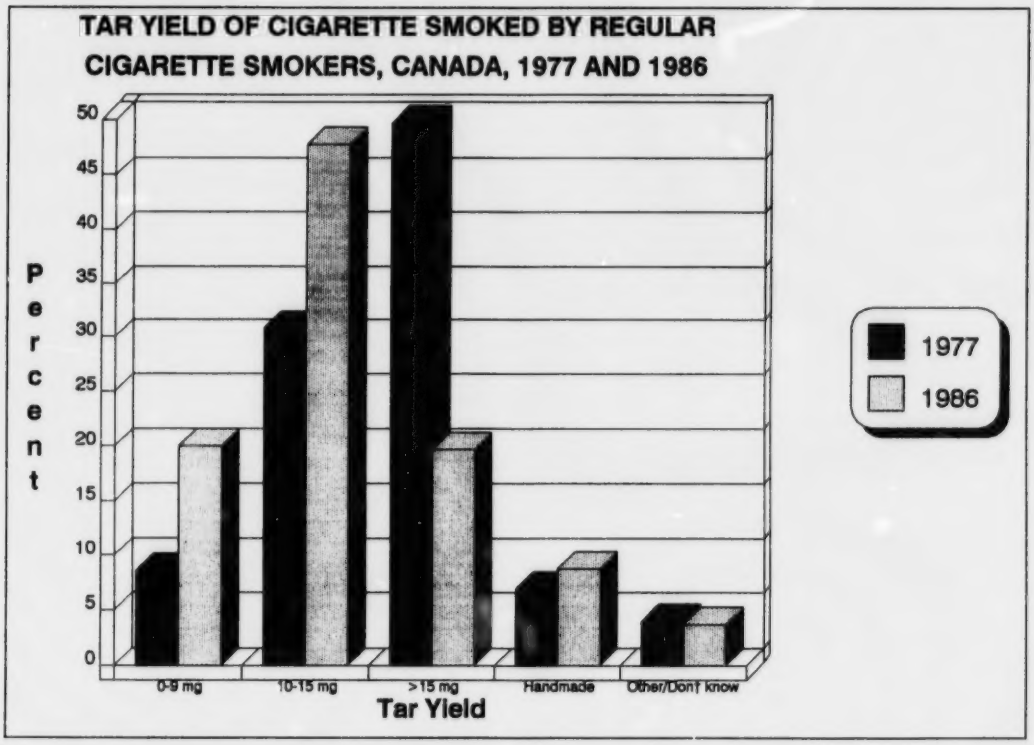


Figure 15


TAR YIELD OF CIGARETTE SMOKED BY REGULAR CIGARETTE SMOKERS, CANADA, 1977 AND 1986
Percent
50
45
40
35
30
25
20
15
10
5
0
0-9 mg
10-15 mg
>15 mg
Handmade
Other/Don't know
Tar Yield
1977
1986

## Table 1. Percentage Distribution of the Population 15 Years of Age and Over, by Smoking Behaviour, Sex and Age, Canada, 1986

| | | Smoking Behaviour | | | | | |
|---|---|---|---|---|---|---|---|
| | | | Non Smokers | | | | |
| | | Total | Never Smoked | Former Smokers | Regular Cigarette Smokers | Occasional Cigarette Smokers | Smoke Only Pipe and/or Cigar |
| ***Both Sexes*** | | | | | | | |
| Total | 15 years and over | 19 694 185 | 44.4% | 22.9% | 28.2% | 3.0% | 1.5% |
| | 15-19 | 1 873 461 | 70.8 | 7.8 | 17.6 | 3.5 | 0.3 |
| | 20-24 | 2 238 867 | 49.6 | 13.5 | 31.7 | 4.6 | 0.6 |
| | 25-44 | 8 172 866 | 39.1 | 22.7 | 33.4 | 3.2 | 1.6 |
| | 45-64 | 4 860 648 | 38.1 | 28.2 | 29.4 | 2.4 | 1.9 |
| | 65 years and over | 2 548 344 | 49.3 | 32.4 | 14.4 | 1.5 | 2.4 |
| | 20 years and over | 17 820 724 | 41.6 | 24.5 | 29.4 | 2.9 | 1.7 |
| ***Males*** | | | | | | | |
| Total | 15 years and over | 9 623 890 | 35.9 | 27.3 | 30.8 | 3.1 | 2.9 |
| | 15-19 | 957 977 | 70.8 | 7.9 | 17.4 | 3.8 | 0.2 |
| | 20-24 | 1 129 658 | 50.3 | 12.8 | 31.3 | 4.4 | 1.1 |
| | 25-44 | 4 054 787 | 33.7 | 24.4 | 35.4 | 3.5 | 3.0 |
| | 45-64 | 2 385 709 | 24.2 | 36.5 | 33.6 | 2.2 | 3.5 |
| | 65 years and over | 1 095 759 | 24.4 | 50.0 | 18.6 | 1.8 | 5.2 |
| | 20 years and over | 8 665 913 | 32.1 | 29.4 | 32.3 | 3.0 | 3.2 |
| ***Females*** | | | | | | | |
| Total | 15 years and over | 10 070 295 | 52.5 | 18.6 | 25.8 | 2.9 | 0.2 |
| | 15-19 | 915 484 | 70.8 | 7.8 | 17.8 | 3.3 | 0.3 |
| | 20-24 | 1 109 209 | 48.9 | 14.2 | 32.0 | 4.8 | 0.1 |
| | 25-44 | 4 118 078 | 44.4 | 21.1 | 31.4 | 2.9 | 0.1 |
| | 45-64 | 2 474 939 | 51.4 | 20.3 | 25.3 | 2.6 | 0.4 |
| | 65 years and over | 1 452 585 | 68.0 | 19.1 | 11.3 | 1.3 | 0.3 |
| | 20 years and over | 9 154 811 | 50.6 | 19.7 | 26.6 | 2.8 | 0.2 |

## Table 2. Percentage Regular Cigarette Smokers in the Adult Population, by Province, Sex and Age, Canada, 1986

| | Canada | Province | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Total | Nfld. | P.E.I. | N.S. | N.B. | Que. | Ont. | Man. | Sask. | Alta. | B.C. |
| ***Both Sexes*** | | | | | | | | | | |
| Total 15 years and over | 28.2% | 31.1% | 25.4% | 30.6% | 30.6% | 33.6% | 25.8% | 27.7% | 27.3% | 29.1% | 21.9% |
| 15-19 years | 17.6 | 19.2 | – | 18.9 | 20.6 | 21.9 | 15.5 | 13.4 | 16.0 | 19.4 | 13.8 |
| 20-24 years | 31.7 | 34.5 | 27.8 | 37.7 | 34.7 | 37.4 | 27.9 | 25.2 | 32.5 | 31.1 | 29.7 |
| 25-44 years | 33.4 | 37.8 | 32.5 | 38.2 | 36.6 | 38.6 | 31.0 | 34.7 | 34.6 | 32.6 | 25.3 |
| 45-64 years | 29.4 | 30.4 | 29.3 | 31.0 | 30.3 | 34.8 | 27.0 | 30.8 | 28.2 | 31.3 | 22.3 |
| 65 years and over | 14.4 | 18.3 | 11.9 | 12.2 | 18.0 | 18.4 | 12.7 | 15.8 | 11.5 | 15.9 | 11.4 |
| 20 years and over | 29.4 | 33.0 | 27.4 | 32.0 | 31.9 | 34.8 | 26.8 | 29.2 | 28.6 | 30.2 | 22.7 |
| ***Males*** | | | | | | | | | | |
| Total 15 years and over | 30.8 | 35.3 | 31.1 | 32.7 | 33.6 | 36.8 | 28.0 | 29.9 | 29.2 | 31.7 | 24.0 |
| 15-19 years | 17.4 | 24.1 | – | 19.7 | 20.2 | 20.1 | 16.7 | 10.7 | 12.8 | 19.3 | 12.3 |
| 20-24 years | 31.3 | 38.3 | 33.6 | 37.0 | 33.4 | 37.2 | 27.8 | 26.1 | 34.8 | 29.3 | 26.9 |
| 25-44 years | 35.4 | 40.3 | 34.8 | 37.6 | 38.4 | 39.6 | 33.9 | 35.9 | 36.2 | 35.6 | 27.5 |
| 45-64 years | 33.6 | 37.1 | 39.7 | 36.0 | 35.3 | 41.8 | 29.1 | 35.6 | 30.1 | 35.7 | 26.7 |
| 65 years and over | 18.6 | 23.4 | 18.5 | 18.7 | 27.1 | 27.2 | 14.2 | 20.4 | 15.8 | 18.6 | 14.1 |
| 20 years and over | 32.3 | 37.1 | 33.3 | 34.3 | 35.3 | 38.5 | 29.2 | 32.1 | 31.0 | 33.1 | 25.2 |
| ***Females*** | | | | | | | | | | |
| Total 15 years and over | 25.8 | 26.9 | 19.8 | 28.7 | 27.8 | 30.6 | 23.7 | 25.5 | 25.5 | 26.6 | 19.9 |
| 15-19 years | 17.8 | 14.2 | – | 18.0 | 20.9 | 23.7 | 14.3 | 16.1 | 19.3 | 19.5 | 15.4 |
| 20-24 years | 32.0 | 30.6 | 21.8 | 38.3 | 36.1 | 37.6 | 27.9 | 24.4 | 30.0 | 33.0 | 32.5 |
| 25-44 years | 31.4 | 35.3 | 30.1 | 38.8 | 34.6 | 37.5 | 28.3 | 33.6 | 33.1 | 29.4 | 23.1 |
| 45-64 years | 25.3 | 23.5 | 19.2 | 26.3 | 25.5 | 26.2 | 25.0 | 26.3 | 26.3 | 26.9 | 18.0 |
| 65 years and over | 11.3 | 13.8 | 6.8 | 7.2 | 10.6 | 12.1 | 11.5 | 12.3 | 7.9 | 13.8 | 9.4 |
| 20 years and over | 26.6 | 28.9 | 21.8 | 29.8 | 28.6 | 31.2 | 24.6 | 26.5 | 26.1 | 27.4 | 20.3 |

## Table 3. Percentage Regular Cigarette Smokers in the Adult Population, by Education, Sex and Age, Canada, 1986

| | Education | | | | | |
|---|---|---|---|---|---|---|
| | Total | 0-8 Years | Some Secondary and No Post-secondary | Some Post-secondary | Post-secondary Certificate or Diploma | University Degree |
| ***Both Sexes*** | | | | | | |
| Total 15 years and over | 28.2% | 31.3% | 31.6% | 24.9% | 24.5% | 14.5% |
| 15-19 years | 17.8 | 25.3 | 17.4 | 13.5 | 8.6 | - |
| 20-24 years | 31.7 | 48.0 | 41.2 | 21.3 | 23.1 | 6.5 |
| 25-44 years | 33.4 | 45.2 | 39.5 | 32.5 | 26.9 | 15.3 |
| 45-64 years | 29.4 | 34.8 | 30.0 | 20.7 | 27.2 | 16.8 |
| 65 years and over | 14.4 | 17.5 | 14.0 | 7.7 | 7.2 | 6.1 |
| 20 years and over | 29.4 | 31.6 | 34.2 | 26.0 | 24.7 | 14.5 |
| ***Males*** | | | | | | |
| Total 15 years and over | 30.8 | 38.5 | 33.0 | 24.4 | 28.3 | 17.6 |
| 15-19 years | 17.4 | 28.9 | 17.0 | 8.9 | 9.5 | - |
| 20-24 years | 31.3 | 60.0 | 40.6 | 17.0 | 21.8 | 8.2 |
| 25-44 years | 35.4 | 49.6 | 40.8 | 34.1 | 30.5 | 19.3 |
| 45-64 years | 33.6 | 42.1 | 33.2 | 23.9 | 32.7 | 18.8 |
| 65 years and over | 18.6 | 25.3 | 14.4 | 2.6 | 14.5 | 4.7 |
| 20 years and over | 32.3 | 39.0 | 36.2 | 25.9 | 28.5 | 17.6 |
| ***Females*** | | | | | | |
| Total 15 years and over | 25.8 | 24.4 | 30.3 | 25.3 | 21.3 | 10.4 |
| 15-19 years | 17.8 | 21.2 | 17.7 | 17.4 | 8.0 | - |
| 20-24 years | 32.0 | 34.8 | 41.8 | 26.0 | 24.2 | 5.2 |
| 25-44 years | 31.4 | 40.9 | 38.3 | 31.1 | 23.7 | 10.4 |
| 45-64 years | 25.3 | 27.2 | 27.4 | 17.5 | 22.5 | 13.4 |
| 65 years and over | 11.3 | 10.7 | 13.8 | 10.7 | 3.7 | 8.8 |
| 20 years and over | 26.6 | 24.5 | 32.4 | 26.1 | 21.5 | 10.4 |

- Data not available.

## Table 4. Percentage Regular Cigarette Smokers in the Adult Population, by Sex and Occupation, Canada, 1986

| Occupation | Total | Both Sexes Regular Smoker | Total Males | Males Regular Smoker | Total Females | Females Regular Smoker |
|---|---|---|---|---|---|---|
| Total | 19 694 185 | 28.2% | 9,623,890 | 30.7% | 10,070,295 | 25.8% |
| Managerial | 2 113 147 | 25.2 | 1,468,659 | 23.6 | 644,489 | 28.6 |
| Professional | 1 886 536 | 16.4 | 663,679 | 20.6 | 1,222,858 | 17.1 |
| Clerical | 2 593 007 | 30.2 | 494,296 | 33.0 | 2,098,711 | 29.5 |
| Sales | 1 495 577 | 27.1 | 782,864 | 25.8 | 712,713 | 28.6 |
| Service | 2 372 731 | 33.2 | 960,323 | 32.2 | 1,412,409 | 33.9 |
| Outdoors | 767 385 | 27.0 | 583,884 | 28.1 | 183,501 | 23.4 |
| Mining | 909 134 | 40.2 | 744,939 | 40.4 | 164,196 | 39.4 |
| Fabricating | 1 282 047 | 34.6 | 918,357 | 37.8 | 363,690 | 26.4 |
| Construction | 923 949 | 38.4 | 907,723 | 38.6 | 16,227 | 30.0 |
| Transportation | 547 844 | 41.8 | 513,092 | 42.4 | 34,752 | 32.9 |
| Other Crafts | 198 028 | 37.0 | 151,595 | 38.6 | 46,433 | 38.5 |
| Never Worked | 1 045 314 | 15.3 | 202,134 | 8.4 | 843,180 | 16.9 |
| Not Applicable | 3 168 165 | 23.7 | 938,933 | 26.9 | 2,229,232 | 22.3 |

Total refers to the total number of workers in the occupational category. Smokers are expressed as a percentage of the total number of workers in the occupational category.

## Table 5. Percentage Distribution of Regular Smokers in the Adult Population, by Age, Sex and Number of Cigarettes Smoked per Day, Canada, 1986

| | Age Group | | | | | |
|---|---|---|---|---|---|---|
| | Total 15 Years and over | 15-19 | 20-24 | 25-44 | 45-64 | 65 Years and over |
| ***Both Sexes*** | | | | | | |
| Total regular smokers | 5 562 424 | 329 164 | 708 664 | 2 729 367 | 1 427 294 | 367 935 |
| Percent | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| 1-10 cigarettes per day | 20.4 | 40.7 | 22.8 | 16.7 | 19.1 | 29.7 |
| 11-25 cigarettes per day | 67.3 | 57.1 | 73.5 | 68.7 | 65.8 | 59.8 |
| Over 25 cigarettes per day | 12.3 | 2.2 | 3.8 | 14.5 | 15.1 | 10.4 |
| ***Males*** | | | | | | |
| Total regular smokers | 2 962 821 | 166 254 | 353 938 | 1 436 896 | 801 422 | 204 310 |
| Percent | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| 1-10 cigarettes per day | 15.7 | 39.8 | 19.3 | 12.4 | 12.8 | 24.2 |
| 11-25 cigarettes per day | 69.0 | 58.6 | 76.7 | 70.2 | 67.2 | 62.2 |
| Over 25 cigarettes per day | 15.3 | 1.6 | 4.0 | 17.3 | 20.0 | 13.6 |
| ***Females*** | | | | | | |
| Total regular smokers | 2 599 603 | 162 910 | 354 726 | 1 292 471 | 625 872 | 163 625 |
| Percent | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| 1-10 cigarettes per day | 25.7 | 41.6 | 26.2 | 21.5 | 27.2 | 36.7 |
| 11-25 cigarettes per day | 65.4 | 55.5 | 70.2 | 67.0 | 64.0 | 56.9 |
| Over 25 cigarettes per day | 8.9 | 2.9 | 3.6 | 11.4 | 8.8 | 6.4 |

## Table 6. Percentage Distribution of Regular Smokers in the Adult Population, by Region, Sex and Number of Cigarettes Smoked per Day, Canada, 1986

| | Region | | | | | |
|---|---|---|---|---|---|---|
| | Total | Atlantic | Quebec | Ontario | Prairies | British Columbia |
| ***Both Sexes*** | | | | | | |
| Total regular smokers | 5 562 424 | 530 454 | 1 742 245 | 1 857 306 | 939 297 | 493 122 |
| Percent | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| 1-10 cigarettes per day | 20.4 | 21.0 | 20.3 | 21.7 | 18.4 | 19.1 |
| 11-25 cigarettes per day | 67.3 | 65.2 | 66.5 | 67.9 | 71.3 | 62.4 |
| Over 25 cigarettes per day | 12.3 | 13.8 | 13.2 | 10.4 | 10.4 | 18.5 |
| ***Males*** | | | | | | |
| Total regular smokers | 2 962 821 | 285 584 | 927 112 | 980 646 | 504 425 | 265 055 |
| Percent | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| 1-10 cigarettes per day | 15.7 | 17.2 | 15.2 | 16.3 | 15.0 | 14.6 |
| 11-25 cigarettes per day | 69.0 | 64.9 | 69.2 | 70.3 | 71.7 | 62.6 |
| Over 25 cigarettes per day | 15.3 | 17.9 | 15.6 | 13.4 | 13.3 | 22.7 |
| ***Females*** | | | | | | |
| Total regular smokers | 2 599 603 | 244 870 | 815 133 | 876 660 | 434 873 | 228 068 |
| Percent | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| 1-10 cigarettes per day | 25.7 | 25.3 | 26.1 | 27.7 | 22.3 | 24.3 |
| 11-25 cigarettes per day | 65.4 | 65.5 | 63.5 | 65.2 | 70.8 | 62.2 |
| Over 25 cigarettes per day | 8.9 | 9.2 | 10.4 | 7.1 | 6.9 | 13.5 |

## Table 7. Percentage Distribution of Regular Smokers in the Adult Population, by Education, Sex and Number of Cigarettes Smoked per Day, Canada, 1986

| | | Education | | | | |
|---|---|---|---|---|---|---|
| | Total | 0-8 Years | Some Secondary and No Post-secondary | Some Post-secondary | Post-secondary Certificate or Diploma | University Degree |
| ***Both Sexes*** | | | | | | |
| Total regular smokers | 5 562 424 | 1 138 677 | 3 087 324 | 438 753 | 593 824 | 303 846 |
| Percent | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| 1-10 cigarettes per day | 20.4 | 19.8 | 20.1 | 20.9 | 23.5 | 18.8 |
| 11-25 cigarettes per day | 67.3 | 65.2 | 68.6 | 67.5 | 65.4 | 64.7 |
| Over 25 cigarettes per day | 12.3 | 15.0 | 11.3 | 11.6 | 11.1 | 16.5 |
| ***Males*** | | | | | | |
| Total regular smokers | 2 962 821 | 689 910 | 1 535 137 | 212 310 | 315 636 | 209 828 |
| Percent | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| 1-10 cigarettes per day | 15.7 | 16.4 | 15.6 | 17.4 | 14.4 | 14.0 |
| 11-25 cigarettes per day | 69.0 | 66.1 | 70.4 | 68.7 | 70.9 | 65.4 |
| Over 25 cigarettes per day | 15.3 | 17.5 | 13.9 | 13.9 | 14.7 | 20.7 |
| ***Females*** | | | | | | |
| Total regular smokers | 2 599 603 | 448 767 | 1 552 187 | 226 443 | 278 188 | 94 018 |
| Percent | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| 1-10 cigarettes per day | 25.7 | 24.9 | 24.5 | 24.2 | 33.9 | 29.6 |
| 11-25 cigarettes per day | 65.4 | 64.0 | 66.9 | 66.4 | 59.1 | 63.3 |
| Over 25 cigarettes per day | 8.9 | 11.1 | 8.6 | 9.4 | 7.0 | 7.1 |

## Table 8. Percentage Distribution of Regular Smokers in the Adult Population, by Age, Sex and Tar Yield of Current Brand Smoked, Canada, 1986

| | Age Group | | | | | |
|---|---|---|---|---|---|---|
| | Total 15 Years and over | 15-19 | 20-24 | 25-44 | 45-64 | 65 Years and over |
| ***Both Sexes*** | | | | | | |
| Total regular smokers | 5 562 424 | 329 164 | 708 664 | 2 729 367 | 1 427 294 | 367 935 |
| Percent | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| 0-9 mg | 20.0 | 10.5 | 16.2 | 20.3 | 21.9 | 26.7 |
| 10-15 mg | 47.8 | 63.4 | 55.8 | 49.0 | 41.1 | 35.4 |
| 16 mg and over | 19.7 | 15.5 | 18.2 | 20.5 | 19.7 | 20.4 |
| Handmade | 8.8 | 5.9 | 6.8 | 7.1 | 12.5 | 13.1 |
| Other | 3.7 | 4.7 | 3.1 | 3.1 | 4.7 | 4.5 |
| ***Males*** | | | | | | |
| Total regular smokers | 2 962 821 | 166 254 | 353 938 | 1 436 896 | 801 422 | 204 310 |
| Percent | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| 0-9 mg | 16.2 | 6.8 | 15.9 | 17.0 | 16.3 | 18.3 |
| 10-15 mg | 46.6 | 63.5 | 50.7 | 48.6 | 41.0 | 33.8 |
| 16 mg and over | 23.5 | 17.1 | 22.5 | 24.2 | 22.8 | 27.7 |
| Handmade | 9.6 | 6.1 | 6.2 | 6.9 | 14.8 | 16.1 |
| Other | 4.1 | 6.4 | 4.7 | 3.3 | 4.9 | 4.1 |
| ***Females*** | | | | | | |
| Total regular smokers | 2 599 603 | 162 910 | 354 726 | 1 292 471 | 625 872 | 163 625 |
| Percent | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| 0-9 mg | 24.4 | 14.2 | 16.5 | 23.9 | 29.0 | 37.2 |
| 10-15 mg | 49.2 | 63.3 | 61.0 | 49.5 | 41.3 | 37.4 |
| 16 mg and over | 15.4 | 13.8 | 13.9 | 16.4 | 15.6 | 11.2 |
| Handmade | 7.8 | 5.7 | 7.3 | 7.2 | 9.6 | 9.3 |
| Other | 3.3 | 3.0 | 1.4 | 3.0 | 4.5 | 5.0 |

## Table 9. Percentage Distribution of Regular Smokers in the Adult Population, by Region, Sex and Tar Yield of Current Brand Smoked, Canada, 1986

| | Region | | | | | |
|---|---|---|---|---|---|---|
| | Total | Atlantic | Quebec | Ontario | Prairies | British Columbia |
| ***Both Sexes*** | | | | | | |
| Total regular smokers | 5 562 424 | 530 454 | 1 742 245 | 1 857 306 | 939 297 | 493 122 |
| Percent | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| 0-9 mg | 20.0 | 12.7 | 14.2 | 24.7 | 25.4 | 21.0 |
| 10-15 mg | 47.8 | 47.1 | 46.1 | 51.8 | 46.1 | 42.8 |
| 16 mg and over | 19.7 | 22.3 | 23.3 | 16.1 | 18.8 | 19.1 |
| Handmade | 8.8 | 15.3 | 13.9 | 2.9 | 6.1 | 10.8 |
| Other | 3.7 | 2.6 | 2.5 | 4.6 | 3.6 | 6.2 |
| ***Males*** | | | | | | |
| Total regular smokers | 2 962 821 | 285 584 | 927 112 | 980 646 | 504 425 | 265 055 |
| Percent | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| 0-9 mg | 16.2 | 9.3 | 11.3 | 20.1 | 21.7 | 16.1 |
| 10-15 mg | 46.6 | 47.2 | 44.1 | 50.4 | 46.2 | 41.4 |
| 16 mg and over | 23.5 | 25.3 | 26.8 | 21.1 | 21.2 | 23.0 |
| Handmade | 9.6 | 15.4 | 15.1 | 3.5 | 6.6 | 12.1 |
| Other | 4.1 | 2.9 | 2.8 | 4.8 | 4.3 | 7.3 |
| ***Females*** | | | | | | |
| Total regular smokers | 2 599 603 | 244 870 | 815 133 | 876 660 | 434 873 | 228 068 |
| Percent | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| 0-9 mg | 24.4 | 16.6 | 17.4 | 29.7 | 29.6 | 26.7 |
| 10-15 mg | 49.2 | 46.9 | 48.5 | 53.3 | 46.0 | 44.5 |
| 16 mg and over | 15.4 | 18.9 | 19.3 | 10.6 | 16.0 | 14.6 |
| Handmade | 7.8 | 15.3 | 12.5 | 2.2 | 5.5 | 9.3 |
| Other | 3.3 | 2.3 | 2.3 | 4.2 | 2.8 | 4.9 |

## Table 10. Percentage Distribution of Regular Smokers in the Adult Population, by Education, Sex and Tar Yield of Present Brand Smoked, Canada, 1986

| | Education | | | | | |
|---|---|---|---|---|---|---|
| | Total | 0-8 Years | Some Secondary and No Post-secondary | Some Post-secondary | Post-secondary Certificate or Diploma | University Degree |
| ***Both Sexes*** | | | | | | |
| Total regular smokers | 5 562 424 | 1 138 677 | 3 087 324 | 438 753 | 593 824 | 303 846 |
| Percent | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| 0-9 mg | 20.0 | 15.4 | 18.5 | 27.0 | 27.3 | 28.8 |
| 10-15 mg | 47.8 | 38.6 | 51.3 | 50.1 | 45.9 | 47.4 |
| 16 mg and over | 19.7 | 25.9 | 19.3 | 15.4 | 16.2 | 13.3 |
| Hand made | 8.8 | 17.1 | 7.8 | 3.5 | 5.3 | 1.9 |
| Other | 3.7 | 3.0 | 3.2 | 4.0 | 5.4 | 8.6 |
| ***Males*** | | | | | | |
| Total regular smokers | 2 962 821 | 689 910 | 1 535 137 | 212 310 | 315 636 | 209 828 |
| Percent | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| 0-9 mg | 16.2 | 12.9 | 14.8 | 24.8 | 18.9 | 24.8 |
| 10-15 mg | 46.6 | 36.8 | 50.7 | 46.7 | 46.9 | 48.3 |
| 16 mg and over | 23.5 | 26.3 | 23.4 | 18.7 | 22.1 | 14.8 |
| Hand made | 9.6 | 18.2 | 7.9 | 4.2 | 7.0 | 2.7 |
| Other | 4.1 | 3.8 | 3.2 | 5.7 | 5.0 | 9.4 |
| ***Females*** | | | | | | |
| Total regular smokers | 2 599 603 | 448 767 | 1 552 187 | 226 443 | 278 188 | 94 018 |
| Percent | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| 0-9 mg | 24.4 | 19.3 | 22.1 | 29.1 | 36.8 | 37.7 |
| 10-15 mg | 49.2 | 41.4 | 51.9 | 53.3 | 44.7 | 45.6 |
| 16 mg and over | 15.4 | 22.2 | 15.2 | 12.3 | 9.4 | 9.9 |
| Hand made | 7.8 | 5.4 | 7.7 | 2.9 | 3.3 | 0.2 |
| Other | 3.3 | 1.8 | 3.2 | 2.4 | 5.8 | 6.6 |

# Table 11. Percentage of Working Population Reporting That Smoking Was Permitted in Their Immediate Work Area, by Occupation and Sex, Canada, 1986[1]

| | Total | Managerial | Professional | Clerical | Sales | Services | Outdoor/ Primary | Mining | Fabricating | Construction | Transportation | Other |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ***Both Sexes*** | | | | | | | | | | | | |
| Total working | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% |
| Yes | 52.7 | 64.6 | 33.5 | 58.1 | 48.5 | 49.4 | 56.3 | 43.0 | 51.2 | 65.3 | 67.4 | 66.8 |
| No | 36.8 | 27.8 | 57.7 | 30.9 | 41.5 | 37.3 | 28.6 | 46.2 | 37.0 | 22.4 | 24.9 | 23.2 |
| Do not know | 10.5 | 7.6 | 8.8 | 11.0 | 10.1 | 13.3 | 15.1 | 10.8 | 11.7 | 12.3 | 7.7 | 9.9 |
| ***Males*** | | | | | | | | | | | | |
| Total working | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Yes | 57.8 | 67.0 | 40.6 | 57.4 | 57.6 | 52.8 | 59.5 | 46.7 | 56.5 | 65.3 | 70.2 | 61.2 |
| No | 31.6 | 24.8 | 50.5 | 27.5 | 33.2 | 34.3 | 25.9 | 43.0 | 32.3 | 22.4 | 21.9 | 27.0 |
| Do not know | 10.6 | 8.1 | 8.9 | 15.2 | 9.2 | 12.9 | 14.6 | 10.3 | 11.2 | 12.3 | 7.9 | 11.9 |
| ***Females*** | | | | | | | | | | | | |
| Total working | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Yes | 46.0 | 58.7 | 29.4 | 58.3 | 37.0 | 46.7 | 44.5 | - | 35.6 | - | - | 88.7 |
| No | 43.6 | 34.9 | 61.8 | 31.7 | 51.8 | 39.6 | 38.4 | - | 51.1 | - | - | 8.7 |
| Do not know | 10.4 | 6.4 | 8.8 | 10.0 | 11.2 | 13.6 | 17.1 | - | 13.3 | - | - | 2.6 |

1 Respondents were asked the question "Is smoking permitted in your immediate work area?" Responses are based on persons who were employed at the time of the survey.

## Table 12. Percentage Of Working Population Reporting Designated Smoking and Non-smoking Areas at Their Place of Work, by Occupation and Sex, Canada, 1986[1,2]

| | Total | Mana-gerial | Profes-sional | Cleri-cal | Sales | Services | Outdoor/ Primary | Mining | Fabricat-ing | Construc-tion | Transpor-tation | Other Crafts |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ***Both Sexes*** | | | | | | | | | | | | |
| Total working | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% |
| Yes | 39.8 | 34.9 | 55.1 | 38.0 | 31.5 | 41.6 | 17.3 | 51.6 | 43.9 | 22.5 | 26.2 | 48.2 |
| No | 47.1 | 54.3 | 33.9 | 48.9 | 56.6 | 42.7 | 65.9 | 34.7 | 40.6 | 61.2 | 62.1 | 39.3 |
| Do not know | 13.2 | 10.8 | 11.0 | 13.0 | 11.9 | 15.7 | 16.7 | 13.7 | 15.5 | 16.3 | 11.7 | 12.5 |
| ***Males*** | | | | | | | | | | | | |
| Total working | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Yes | 36.4 | 32.8 | 47.5 | 39.3 | 25.4 | 42.9 | 18.6 | 50.1 | 40.8 | 22.3 | 26.1 | 46.9 |
| No | 49.7 | 55.5 | 41.0 | 41.9 | 63.4 | 39.9 | 65.2 | 36.3 | 43.9 | 61.4 | 61.8 | 40.2 |
| Do not know | 13.9 | 11.7 | 11.5 | 11.8 | 11.2 | 17.2 | 16.2 | 13.6 | 15.3 | 16.3 | 12.1 | 12.9 |
| ***Females*** | | | | | | | | | | | | |
| Total working | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Yes | 44.3 | 39.3 | 61.6 | 37.7 | 39.3 | 40.6 | 12.6 | - | 53.0 | - | - | 52.3 |
| No | 43.6 | 51.8 | 27.9 | 50.7 | 47.9 | 44.9 | 68.4 | - | 31.0 | - | - | 36.8 |
| Do not know | 12.1 | 8.9 | 10.5 | 11.6 | 12.8 | 14.5 | 19.0 | - | 16.0 | - | - | 10.9 |

1 Column percentages may not add to 100% due to rounding.

2 Respondents were asked the question "At your place of work, are there areas that are designated as smoking and non-smoking?" Responses are based on persons who were employed at the time of the survey.

# Table 13. Percentage Distribution of Attitudes toward the Restriction of Smoking in the Workplace, by Occupation and Sex, Canada, 1986[1,2]

| | Total | Managerial | Professional | Clerical | Sales | Services | Outdoor/ Primary | Mining | Fabricating | Construction | Transportation | Other Crafts |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ***Both Sexes*** | | | | | | | | | | | | |
| Total | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% |
| Yes, permitted | 13.7 | 16.9 | 7.3 | 14.7 | 14.3 | 15.2 | 13.2 | 21.7 | 17.7 | 23.3 | 22.1 | 16.5 |
| Yes, only in restricted areas | 53.8 | 56.2 | 59.7 | 57.7 | 52.9 | 55.3 | 52.0 | 58.0 | 53.5 | 49.1 | 53.6 | 55.8 |
| Not permitted at all | 27.6 | 24.3 | 30.7 | 25.2 | 28.8 | 24.5 | 28.7 | 17.0 | 24.6 | 21.8 | 18.1 | 23.7 |
| No opinion | 4.9 | 2.5 | 2.3 | 2.4 | 4.1 | 4.9 | 6.1 | 3.3 | 4.3 | 5.8 | 6.3 | 4.1 |
| ***Males*** | | | | | | | | | | | | |
| Total | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Yes, permitted | 17.9 | 18.2 | 11.3 | 19.1 | 18.6 | 14.3 | 15.8 | 24.9 | 21.6 | 23.3 | 22.1 | 17.5 |
| Yes, only in restricted areas | 51.6 | 55.5 | 55.8 | 49.8 | 48.4 | 54.5 | 49.4 | 55.8 | 52.6 | 49.1 | 54.4 | 52.6 |
| Not permitted at all | 25.4 | 23.6 | 30.4 | 26.9 | 27.4 | 25.6 | 28.2 | 15.9 | 21.7 | 21.8 | 16.6 | 24.3 |
| No opinion | 5.2 | 2.7 | 2.4 | 4.1 | 5.7 | 5.6 | 6.6 | 3.4 | 4.1 | 5.8 | 6.9 | 5.6 |
| ***Females*** | | | | | | | | | | | | |
| Total | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Yes, permitted | 10.3 | 14.8 | 4.5 | 13.8 | 10.3 | 15.8 | 6.0 | 9.6 | 8.8 | 24.0 | 21.1 | 13.6 |
| Yes, only in restricted areas | 55.5 | 57.5 | 62.5 | 59.2 | 57.0 | 55.8 | 58.9 | 66.4 | 55.3 | 49.0 | 45.7 | 63.8 |
| Not permitted at all | 29.3 | 25.5 | 30.9 | 24.9 | 30.1 | 24.0 | 30.2 | 21.1 | 31.1 | 22.1 | 33.2 | 22.2 |
| No opinion | 4.9 | 2.3 | 2.2 | 2.1 | 2.7 | 4.5 | 4.9 | 2.9 | 4.8 | 5.0 | - | 99.6 |

1 Percentages down columns may not total 100% due to rounding.

2 Respondents were asked the question "Should smoking be permitted in the workplace?"

## Table 14. Percentage Distribution of Attitudes toward the Restriction of Smoking in Various Settings, by Sex, Canada, 1986

| | Doctors' Offices | Work-places | Hospi-tals | Restau-rants | Movie Theatres | Inter-city Buses | Trains | Govern-ment Offices | Stores | Schools | Banks | Air-planes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ***Both Sexes*** | | | | | | | | | | | | |
| Permitted | 4.6% | 13.7% | 2.4% | 10.4% | 3.9% | 4.7% | 6.5% | 11.1% | 9.4% | 2.7% | 13.3% | 5.5% |
| Only permitted in restricted areas | 12.7 | 53.8 | 37.2 | 59.4 | 23.2 | 18.0 | 48.6 | 47.1 | 18.5 | 23.1 | 20.5 | 41.6 |
| Not permitted at all | 80.0 | 27.6 | 58.2 | 27.3 | 69.3 | 73.2 | 41.0 | 35.4 | 68.2 | 71.6 | 61.1 | 49.1 |
| No opinion | 2.8 | 5.0 | 2.2 | 2.8 | 3.5 | 4.1 | 3.9 | 6.5 | 3.9 | 2.6 | 5.0 | 3.8 |
| Total | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| ***Males*** | | | | | | | | | | | | |
| Permitted | 6.0 | 17.9 | 3.4 | 12.2 | 5.5 | 6.6 | 8.4 | 13.9 | 13.3 | 3.9 | 16.9 | 7.3 |
| Only permitted in restricted areas | 13.3 | 51.6 | 36.2 | 56.7 | 23.8 | 19.0 | 49.0 | 45.3 | 19.0 | 23.7 | 21.0 | 41.6 |
| Not permitted at all | 77.6 | 25.4 | 57.8 | 27.8 | 67.2 | 69.9 | 38.5 | 34.5 | 63.0 | 69.5 | 57.1 | 47.4 |
| No opinion | 3.1 | 5.1 | 2.6 | 3.2 | 3.6 | 4.5 | 4.1 | 6.3 | 4.7 | 2.9 | 5.0 | 3.7 |
| Total | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| ***Females*** | | | | | | | | | | | | |
| Permitted | 3.4 | 10.3 | 1.7 | 9.0 | 2.6 | 3.2 | 5.0 | 8.8 | 6.3 | 1.8 | 10.5 | 4.1 |
| Only permitted in restricted areas | 12.2 | 55.5 | 37.9 | 61.5 | 22.8 | 17.2 | 48.3 | 48.4 | 18.1 | 22.6 | 20.2 | 41.5 |
| Not permitted at all | 81.8 | 29.3 | 58.5 | 26.9 | 71.0 | 75.9 | 42.9 | 36.1 | 72.3 | 73.4 | 64.3 | 50.4 |
| No opinion | 2.5 | 4.9 | 1.8 | 2.6 | 3.5 | 3.7 | 3.8 | 6.6 | 3.3 | 2.3 | 5.1 | 3.9 |
| Total | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

## Table 15. Percentage Regular Cigarette Smokers in the Population 15 Years of Age and Over, by Sex and Age, Canada, 1966-1986

| | % Regular Cigarette Smokers | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 1966 | 1970 | 1972 | 1977 | 1979 | 1981 | 1983 | 1986 |
| ***Both Sexes*** | | | | | | | | |
| Total 15 years and over | 42.8% | 40.6% | 39.8% | 35.9% | 34.2% | 32.7% | 31.1% | 28.2% |
| 15 - 19 | 27.6 | 30.6 | 31.7 | 26.8 | 26.4 | 23.1 | 20.3 | 17.6 |
| 20 - 24 | 51.7 | 47.7 | 47.3 | 43.0 | 41.1 | 40.4 | 37.3 | 31.7 |
| 25 - 44 | 46.7 | 47.7 | 46.1 | 41.8 | 40.0 | 38.0 | 36.4 | 33.4 |
| 45 - 64 | 44.8 | 41.2 | 40.6 | 36.3 | 34.5 | 33.7 | 31.6 | 29.4 |
| 65 years and over | 19.5 | 20.1 | 19.3 | 18.8 | 16.7 | 15.3 | 16.4 | 14.4 |
| 20 years and over | 45.3 | 42.2 | 43.3 | 37.3 | 35.4 | 34.0 | 32.4 | 29.4 |
| ***Males*** | | | | | | | | |
| Total 15 years and over | 53.6 | 48.9 | 47.4 | 40.8 | 38.6 | 36.7 | 34.0 | 30.8 |
| 15 - 19 | 35.1 | 35.7 | 35.0 | 26.9 | 26.8 | 22.8 | 20.3 | 17.4 |
| 20 - 24 | 60.1 | 52.9 | 52.6 | 45.2 | 42.3 | 39.9 | 37.3 | 31.3 |
| 25 - 44 | 61.8 | 55.5 | 53.3 | 47.0 | 44.0 | 42.6 | 39.0 | 35.4 |
| 45 - 64 | 57.8 | 51.3 | 50.0 | 42.3 | 40.5 | 39.3 | 35.6 | 33.6 |
| 65 years and over | 32.3 | 31.4 | 30.4 | 27.5 | 24.6 | 21.3 | 22.1 | 18.6 |
| 20 years and over | 56.7 | 51.1 | 49.5 | 43.0 | 40.4 | 38.7 | 35.7 | 32.3 |
| ***Females*** | | | | | | | | |
| Total 15 years and over | 32.1 | 32.4 | 32.4 | 31.1 | 30.1 | 28.9 | 28.3 | 25.8 |
| 15 - 19 | 20.0 | 24.9 | 28.4 | 26.7 | 26.0 | 23.4 | 20.3 | 17.8 |
| 20 - 24 | 43.4 | 41.4 | 40.6 | 40.7 | 39.8 | 40.8 | 37.3 | 32.0 |
| 25 - 44 | 31.4 | 40.0 | 38.8 | 36.6 | 36.0 | 33.4 | 33.9 | 31.4 |
| 45 - 64 | 31.7 | 31.5 | 31.6 | 30.5 | 28.9 | 28.5 | 27.8 | 25.3 |
| 65 years and over | 8.3 | 10.5 | 10.4 | 12.0 | 10.6 | 10.8 | 12.1 | 11.3 |
| 20 years and over | 34.0 | 33.6 | 33.0 | 31.8 | 30.7 | 29.6 | 29.3 | 26.6 |

## Table 16. Percentage Distribution of Regular Smokers by Number of Cigarettes Smoked per Day, by Sex and Age, Canada, 1966-1986

| | Cigarettes Smoked per Day | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 - 10 | | | | 11 - 25 | | | | > 25 | | | |
| Age/Sex | 1966 | 1970 | 1981 | 1986 | 1966 | 1970 | 1981 | 1986 | 1966 | 1970 | 1981 | 1986 |
| ***Both Sexes*** | | | | | | | | | | | | |
| Total 15 years and over | 26.9 | 24.6 | 19.7 | 20.4 | 65.0 | 65.8 | 67.8 | 67.3 | 8.2 | 9.6 | 12.5 | 12.3 |
| 15 - 19 | 49.3 | 48.2 | 37.8 | 40.7 | 47.8 | 49.2 | 59.5 | 57.1 | 2.9 | 2.6 | 2.7 | 2.2 |
| 20 - 24 | 27.5 | 24.3 | 20.7 | 22.8 | 67.6 | 69.4 | 72.4 | 73.5 | 5.1 | 6.3 | 6.9 | 3.8 |
| 25 - 44 | 22.1 | 18.7 | 15.7 | 16.7 | 68.9 | 70.2 | 69.3 | 68.7 | 9.1 | 11.1 | 15.0 | 14.5 |
| 45 - 64 | 24.9 | 22.3 | 17.3 | 19.1 | 65.0 | 65.8 | 66.8 | 65.8 | 10.1 | 11.9 | 15.9 | 15.1 |
| 65 years and over | 40.5 | 36.8 | 32.4 | 29.7 | 53.5 | 55.2 | 60.9 | 59.8 | 6.0 | 8.0 | 6.7 | 10.4 |
| ***Males*** | | | | | | | | | | | | |
| Total 15 years and over | 21.4 | 20.3 | 17.6 | 15.7 | 68.1 | 67.5 | 67.3 | 69.0 | 10.6 | 12.2 | 15.1 | 15.3 |
| 15 - 19 | 46.9 | 45.7 | 40.4 | 39.8 | 49.4 | 52.1 | 56.1 | 58.6 | 3.7 | 2.2 | 3.5 | 1.6 |
| 20 - 24 | 20.5 | 20.8 | 19.9 | 19.3 | 73.1 | 71.6 | 72.8 | 76.7 | 6.4 | 7.6 | 7.3 | 4.0 |
| 25 - 44 | 15.5 | 13.3 | 13.5 | 12.4 | 72.6 | 72.4 | 68.6 | 70.2 | 11.9 | 14.4 | 17.9 | 17.3 |
| 45 - 64 | 19.0 | 17.7 | 15.0 | 12.8 | 67.7 | 66.7 | 65.6 | 67.2 | 13.3 | 15.8 | 19.4 | 20.0 |
| 65 years and over | 37.8 | 33.4 | 25.6 | 24.2 | 55.1 | 56.7 | 66.0 | 62.2 | 7.4 | 9.6 | 8.4 | 13.6 |
| ***Females*** | | | | | | | | | | | | |
| Total 15 years and over | 36.5 | 31.2 | 22.3 | 25.7 | 59.6 | 63.2 | 68.5 | 65.4 | 4.2 | 5.6 | 9.2 | 8.9 |
| 15 - 19 | 54.5 | 53.0 | 35.1 | 41.6 | 42.2 | 45.4 | 63.0 | 55.5 | 3.3 | 1.6 | 1.9 | 2.9 |
| 20 - 24 | 38.0 | 29.0 | 21.4 | 26.2 | 59.3 | 66.4 | 72.0 | 70.2 | 2.7 | 4.8 | 6.6 | 3.6 |
| 25 - 44 | 32.1 | 26.3 | 18.5 | 21.5 | 63.0 | 67.0 | 70.1 | 67.0 | 4.7 | 6.8 | 11.4 | 11.4 |
| 45 - 64 | 36.3 | 29.8 | 20.4 | 27.2 | 59.7 | 64.1 | 68.3 | 64.0 | 4.0 | 6.0 | 11.3 | 8.8 |
| 65 years and over | 49.4 | 46.7 | 42.6 | 36.7 | 48.3 | 51.4 | 53.2 | 56.9 | 2.3 | 1.9 | 4.2 | 6.4 |

## Table 17. Percentage Distribution of Regular Smokers by Grouped Tar Yield of Cigarette Brand Smoked, by Sex, Canada, 1977-1986

| | Tar Yield | | | | |
|---|---|---|---|---|---|
| | 0-9 mg | 10-15 mg | > 15 mg | Handmade | Other/Don't know |
| ***Both Sexes*** | | | | | |
| 1977 | 8.6% | 30.8% | 49.7% | 6.9% | 4.0% |
| 1979 | 13.6 | 37.1 | 39.8 | 6.2 | 3.3 |
| 1981 | 18.8 | 41.2 | 32.1 | 6.4 | 1.5 |
| 1983 | 19.4 | 47.9 | 24.6 | 6.3 | 1.8 |
| 1986 | 20.0 | 47.8 | 19.7 | 8.8 | 3.7 |
| ***Males*** | | | | | |
| 1977 | 6.5 | 26.5 | 53.8 | 8.3 | 4.9 |
| 1979 | 9.9 | 33.7 | 44.9 | 7.5 | 4.0 |
| 1981 | 14.3 | 40.1 | 35.9 | 8.0 | 1.7 |
| 1983 | 15.5 | 46.3 | 28.7 | 7.3 | 2.2 |
| 1986 | 16.2 | 46.6 | 23.5 | 9.6 | 4.1 |
| ***Females*** | | | | | |
| 1977 | 11.3 | 36.3 | 44.5 | 5.2 | 2.7 |
| 1979 | 18.1 | 41.3 | 33.4 | 4.5 | 2.7 |
| 1981 | 24.3 | 42.4 | 27.4 | 4.6 | 1.3 |
| 1983 | 23.8 | 49.7 | 19.8 | 5.2 | 1.5 |
| 1986 | 24.4 | 49.2 | 15.4 | 7.8 | 3.2 |

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# Table 18. Number of Regular Cigarette Smokers in the Adult Population, by Age and Sex, Canada and Provinces, 1986

| | Province | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Total | Nfld. | P.E.I. | N.S. | N.B. | Que. | Ont. | Man. | Sask. | Alta. | B.C. |
| ***Both Sexes*** | | | | | | | | | | | |
| Total 15 years and over | 5 562 424 | 133 382 | 24 398 | 206 213 | 166 461 | 1 742 245 | 1 857 306 | 222 802 | 202 191 | 514 304 | 493 122 |
| 15-19 years | 329 164 | 11 051 | 890 | 13 215 | 12 183 | 100 798 | 105 927 | 10 458 | 11 770 | 34 942 | 27 928 |
| 20-24 years | 708 664 | 19 744 | 3 257 | 29 970 | 22 860 | 220 359 | 227 333 | 23 140 | 28 281 | 65 669 | 68 051 |
| 25-44 years | 2 729 367 | 66 482 | 12 155 | 102 308 | 80 476 | 856 418 | 905 463 | 110 041 | 99 165 | 264 030 | 232 830 |
| 45-64 years | 1 427 294 | 27 271 | 6 282 | 48 575 | 37 489 | 452 486 | 498 460 | 59 202 | 49 353 | 121 951 | 126 226 |
| 65 years and over | 367 935 | 8 834 | 1 813 | 12 145 | 13 453 | 112 184 | 120 124 | 19 961 | 13 623 | 27 712 | 38 087 |
| 20 years and over | 5 233 261 | 122 332 | 23 508 | 192 997 | 154 278 | 1 641 447 | 1 751 379 | 212 343 | 190 421 | 479 362 | 465 194 |
| ***Males*** | | | | | | | | | | | |
| Total 15 years and over | 2 962 821 | 75 401 | 14 697 | 106 310 | 89 176 | 927 112 | 980 646 | 117 234 | 107 154 | 280 036 | 26 055 |
| 15-19 years | 166 254 | 7 032 | 755 | 7 082 | 6 142 | 47 265 | 58 315 | 4 264 | 4 849 | 17 853 | 12 696 |
| 20-24 years | 353 938 | 11 033 | 2 011 | 14 667 | 11 058 | 110 753 | 114 973 | 12 010 | 15 360 | 31 076 | 30 996 |
| 25-44 years | 1 436 896 | 35 135 | 6 506 | 49 021 | 41 757 | 437 308 | 486 196 | 56 563 | 52 211 | 146 645 | 125 554 |
| 45-64 years | 801 422 | 16 899 | 4 190 | 27 431 | 21 302 | 262 972 | 263 991 | 33 264 | 26 204 | 70 038 | 75 130 |
| 65 years and over | 204 310 | 5 301 | 1 234 | 8 107 | 8 917 | 68 813 | 57 170 | 11 134 | 8 530 | 14 424 | 20 678 |
| 20 years and over | 2 796 567 | 68 368 | 13 942 | 99 228 | 83 034 | 879 847 | 922 331 | 112 971 | 102 305 | 262 183 | 252 358 |
| ***Females*** | | | | | | | | | | | |
| Total 15 years and over | 2 599 603 | 57 982 | 9 701 | 99 903 | 77 285 | 815 133 | 876 660 | 105 568 | 95 037 | 234 267 | 22 068 |
| 15-19 years | 162 910 | 4 019 | 135 | 6 133 | 6 041 | 53 533 | 47 611 | 6 195 | 6 921 | 17 089 | 15 232 |
| 20-24 years | 354 726 | 8 710 | 1 245 | 15 303 | 11 802 | 109 605 | 112 361 | 11 130 | 12 921 | 34 593 | 37 055 |
| 25-44 years | 1 292 471 | 31 347 | 5 649 | 53 287 | 38 719 | 419 110 | 419 267 | 53 478 | 46 954 | 117 385 | 107 276 |
| 45-64 years | 625 872 | 10 373 | 2 092 | 21 143 | 16 187 | 189 514 | 234 468 | 25 938 | 23 149 | 51 912 | 51 096 |
| 65 years and over | 163 625 | 3 533 | 580 | 4 037 | 4 536 | 43 371 | 62 953 | 8 827 | 5 092 | 13 287 | 17 408 |
| 20 years and over | 2 436 694 | 53 963 | 9 566 | 93 770 | 71 243 | 761 600 | 829 049 | 99 373 | 88 117 | 217 178 | 212 836 |

# Table 19. Number of Regular Smokers in the Adult Population, by Education, Sex and Age, Canada, 1986

| | Education | | | | | |
|---|---|---|---|---|---|---|
| | Total | 0-8 Years | Some Secondary and No Post-secondary | Some Post-secondary | Post-secondary Certificate or Diploma | University Degree |
| ***Both Sexes*** | | | | | | |
| Total 15 years and over | 5 562 424 | 1 138 677 | 3 087 324 | 438 753 | 593 824 | 303 846 |
| 15-19 years | 329 164 | 39 555 | 265 277 | 22 228 | 2 104 | - |
| 20-24 years | 708 664 | 51 243 | 454 248 | 99 550 | 93 485 | 10 137 |
| 25-44 years | 2 729 367 | 331 803 | 1 582 154 | 260 177 | 352 794 | 202 439 |
| 45-64 years | 1 427 294 | 513 368 | 649 508 | 49 485 | 131 327 | 83 607 |
| 65 years and over | 367 935 | 202 709 | 136 137 | 7 314 | 14 114 | 7 662 |
| 20 years and over | 5 233 261 | 1 099 123 | 2 822 047 | 416 526 | 591 719 | 303 846 |
| ***Males*** | | | | | | |
| Total 15 years and over | 2 962 821 | 689 910 | 1 535 137 | 212 310 | 315 636 | 209 828 |
| 15-19 years | 166 254 | 24 391 | 134 273 | 6 724 | 865 | - |
| 20-24 years | 353 938 | 33 588 | 231 107 | 41 263 | 42 559 | 5 422 |
| 25-44 years | 1 436 896 | 179 646 | 791 151 | 135 037 | 189 664 | 141 399 |
| 45-64 years | 801 422 | 315 963 | 324 545 | 28 386 | 73 306 | 59 222 |
| 65 years and over | 204 310 | 136 323 | 54 060 | 900 | 9 242 | 3 786 |
| 20 years and over | 2 796 567 | 665 519 | 1 400 864 | 205 586 | 314 771 | 209 828 |
| ***Females*** | | | | | | |
| Total 15 years and over | 2 599 603 | 448 767 | 1 552 187 | 226 443 | 278 188 | 94 018 |
| 15-19 years | 162 910 | 15 163 | 131 004 | 15 503 | 1 239 | - |
| 20-24 years | 354 726 | 17 656 | 223 141 | 58 287 | 50 926 | 4 716 |
| 25-44 years | 1 292 471 | 152 157 | 791 003 | 125 140 | 163 131 | 61 041 |
| 45-64 years | 625 872 | 197 405 | 324 963 | 21 098 | 58 021 | 24 386 |
| 65 years and over | 163 625 | 66 386 | 82 077 | 6 414 | 4 871 | 3 876 |
| 20 years and over | 2 436 694 | 433 604 | 1 421 183 | 210 940 | 276 949 | 94 018 |

- Data not available.

## Table 20. Percentage Regular Smokers in the Adult Population, by Region, Sex and Age, Canada, 1986

| | Region | | | | | |
|---|---|---|---|---|---|---|
| | Total | Atlantic | Quebec | Ontario | Prairies | British Columbia |
| ***Both Sexes*** | | | | | | |
| Total 15 years and over | 28.2% | 30.5% | 33.6% | 25.8% | 28.4% | 21.9% |
| 15-19 years | 17.6 | 18.9 | 21.9 | 15.5 | 17.2 | 13.8 |
| 20-24 years | 31.7 | 35.4 | 37.4 | 27.9 | 30.0 | 29.7 |
| 25-44 years | 33.4 | 37.3 | 38.6 | 31.0 | 33.5 | 25.3 |
| 45-64 years | 29.4 | 30.5 | 34.8 | 27.0 | 30.5 | 22.3 |
| 65 years and over | 14.4 | 15.2 | 18.4 | 12.7 | 14.6 | 11.4 |
| 20 years and over | 29.4 | 31.9 | 34.8 | 26.8 | 29.6 | 22.7 |
| ***Males*** | | | | | | |
| Total 15 years and over | 30.8 | 33.5 | 36.8 | 28.0 | 30.7 | 24.0 |
| 15-19 years | 17.4 | 20.8 | 20.1 | 16.7 | 15.9 | 12.3 |
| 20-24 years | 31.3 | 36.1 | 37.2 | 27.8 | 29.8 | 26.9 |
| 25-44 years | 35.4 | 38.4 | 39.6 | 33.9 | 35.8 | 27.5 |
| 45-64 years | 33.6 | 36.2 | 41.8 | 29.1 | 34.4 | 26.7 |
| 65 years and over | 18.6 | 22.3 | 27.2 | 14.2 | 18.3 | 14.1 |
| 20 years and over | 32.3 | 35.2 | 38.5 | 29.2 | 32.4 | 25.2 |
| ***Females*** | | | | | | |
| Total 15 years and over | 25.8 | 27.5 | 30.6 | 23.7 | 26.1 | 19.9 |
| 15-19 years | 17.8 | 17.0 | 23.7 | 14.3 | 18.7 | 15.4 |
| 20-24 years | 32.0 | 34.7 | 37.6 | 27.9 | 30.3 | 32.5 |
| 25-44 years | 31.4 | 36.2 | 37.5 | 28.3 | 31.1 | 23.1 |
| 45-64 years | 25.3 | 25.0 | 28.2 | 25.0 | 26.6 | 18.0 |
| 65 years and over | 11.3 | 9.6 | 12.1 | 11.5 | 11.7 | 9.4 |
| 20 years and over | 26.6 | 28.8 | 31.2 | 24.6 | 26.9 | 20.3 |

## Table 21. Number of Regular Smokers in the Adult Population, by Region, Sex and Age, Canada, 1986

| | Region | | | | | |
|---|---|---|---|---|---|---|
| | Total | Atlantic | Quebec | Ontario | Prairies | British Columbia |
| ***Both Sexes*** | | | | | | |
| Total 15 years and over | 5 562 424 | 530 454 | 1 742 245 | 1 857 306 | 939 297 | 493 122 |
| 15-19 years | 329 164 | 37 339 | 100 798 | 105 927 | 57 171 | 27 928 |
| 20-24 years | 708 664 | 75 830 | 220 359 | 227 333 | 117 090 | 68 051 |
| 25-44 years | 2 729 367 | 261 421 | 856 418 | 905 463 | 473 235 | 232 830 |
| 45-64 years | 1 427 294 | 119 618 | 452 486 | 498 460 | 230 506 | 126 226 |
| 65 years and over | 367 935 | 36 246 | 112 184 | 120 124 | 61 295 | 38 087 |
| 20 years and over | 5 233 261 | 493 114 | 1 641 447 | 1 751 379 | 882 126 | 465 194 |
| ***Males*** | | | | | | |
| Total 15 years and over | 2 962 821 | 285 584 | 927 112 | 980 646 | 504 425 | 265 055 |
| 15-19 years | 166 254 | 21 011 | 47 265 | 58 315 | 26 966 | 12 696 |
| 20-24 years | 353 938 | 38 770 | 110 753 | 114 973 | 58 446 | 30 996 |
| 25-44 years | 1 436 896 | 132 420 | 437 308 | 486 196 | 255 419 | 125 554 |
| 45-64 years | 801 422 | 69 823 | 262 972 | 263 991 | 129 506 | 75 130 |
| 65 years and over | 204 310 | 23 560 | 68 813 | 57 170 | 34 088 | 20 678 |
| 20 years and over | 2 796 567 | 264 573 | 879 847 | 922 331 | 477 459 | 252 358 |
| ***Females*** | | | | | | |
| Total 15 years and over | 2 599 603 | 244 870 | 815 133 | 876 660 | 434 873 | 228 068 |
| 15-19 years | 162 910 | 16 328 | 53 533 | 47 611 | 30 205 | 15 232 |
| 20-24 years | 354 726 | 37 060 | 109 605 | 112 361 | 8 644 | 37 055 |
| 25-44 years | 1 292 471 | 129 001 | 419 110 | 419 267 | 217 817 | 107 276 |
| 45-64 years | 625 872 | 49 795 | 189 514 | 234 468 | 101 000 | 51 096 |
| 65 years and over | 163 625 | 12 686 | 43 371 | 62 953 | 27 207 | 17 408 |
| 20 years and over | 2 436 694 | 228 542 | 761 600 | 829 049 | 404 668 | 212 836 |

## Table 22. Percentage Regular Smokers in the Adult Population, by Education, Sex and Region, Canada, 1986

| | Education | | | | | |
|---|---|---|---|---|---|---|
| | Total | 0-8 years | Some Secondary and No Post-secondary | Some Post-secondary | Post secondary Certificat or Diploma | University Degree |
| ***Both Sexes*** | | | | | | |
| Canada | 28.2% | 31.3% | 31.6% | 24.9% | 24.5% | 14.5% |
| Atlantic | 30.5 | 36.5 | 32.6 | 22.7 | 23.8 | 16.7 |
| Quebec | 33.6 | 37.2 | 36.4 | 28.8 | 27.6 | 22.2 |
| Ontario | 25.8 | 26.7 | 29.5 | 25.5 | 23.5 | 10.6 |
| Prairies | 26.4 | 26.2 | 33.0 | 25.4 | 26.2 | 14.7 |
| British Columbia | 21.9 | 22.7 | 25.7 | 18.3 | 17.7 | 11.1 |
| ***Males*** | | | | | | |
| Canada | 30.8 | 38.5 | 33.0 | 24.4 | 28.3 | 17.6 |
| Atlantic | 33.5 | 41.4 | 34.6 | 22.8 | 30.0 | 17.7 |
| Quebec | 36.8 | 45.1 | 38.0 | 24.4 | 27.9 | 30.7 |
| Ontario | 28.0 | 34.0 | 30.8 | 25.5 | 28.7 | 12.0 |
| Prairies | 30.7 | 33.4 | 34.5 | 28.4 | 29.8 | 15.4 |
| British Columbia | 24.0 | 29.3 | 26.6 | 17.1 | 24.6 | 14.1 |
| ***Females*** | | | | | | |
| Canada | 25.8 | 24.4 | 30.3 | 25.3 | 21.3 | 10.4 |
| Atlantic | 27.5 | 30.4 | 30.8 | 22.6 | 19.7 | 15.6 |
| Quebec | 30.6 | 29.9 | 34.9 | 32.7 | 27.3 | 10.8 |
| Ontario | 23.7 | 20.1 | 28.4 | 25.5 | 19.5 | 8.8 |
| Prairies | 26.1 | 18.7 | 31.6 | 22.6 | 22.9 | 13.8 |
| British Columbia | 19.9 | 14.9 | 25.0 | 19.4 | 11.9 | 7.3 |

## Table 23. Number of Regular Smokers in the Adult Population, by Education, Sex and Region, Canada, 1986

| | Education | | | | | |
|---|---|---|---|---|---|---|
| | Total | 0-8 years | Some Secondary and No Post-secondary | Some Post-secondary | Post-secondary Certificate or Diploma | University Degree |
| ***Both Sexes*** | | | | | | |
| Total | 5 562 424 | 1 138 677 | 3 087 324 | 438 753 | 593 824 | 303 846 |
| Atlantic | 530 454 | 153 781 | 274 091 | 31 023 | 47 768 | 23 791 |
| Quebec | 1 742 245 | 497 812 | 853 920 | 97 343 | 185 403 | 107 768 |
| Ontario | 1 857 306 | 303 658 | 1 084 281 | 177 535 | 201 954 | 89 878 |
| Prairies | 939 297 | 123 403 | 563 152 | 86 141 | 113 312 | 53 289 |
| British Columbia | 493 122 | 60 023 | 311 882 | 46 712 | 45 386 | 29 120 |
| ***Males*** | | | | | | |
| Total | 2 962 821 | 689 910 | 1 535 137 | 212 310 | 315 636 | 209 828 |
| Atlantic | 285 584 | 96 501 | 135 689 | 15 894 | 23 823 | 13 676 |
| Quebec | 927 112 | 287 976 | 422 188 | 38 766 | 92 652 | 85 531 |
| Ontario | 980 646 | 183 538 | 542 357 | 89 390 | 107 411 | 57 951 |
| Prairies | 504 425 | 79 970 | 282 452 | 46 950 | 62 935 | 32 118 |
| British Columbia | 265 055 | 41 925 | 152 451 | 21 311 | 28 816 | 20 553 |
| ***Females*** | | | | | | |
| Total | 2 599 603 | 448 767 | 1 552 187 | 226 443 | 278 188 | 94 018 |
| Atlantic | 244 870 | 57 280 | 138 401 | 15 129 | 23 945 | 10 115 |
| Quebec | 815 133 | 209 836 | 431 731 | 58 577 | 92 751 | 22 237 |
| Ontario | 876 660 | 120 120 | 541 924 | 88 145 | 94 544 | 31 928 |
| Prairies | 434 873 | 43 433 | 280 700 | 39 191 | 50 378 | 21 171 |
| British Columbia | 228 068 | 18 098 | 159 431 | 25 401 | 6 570 | 8 567 |

## Table 24. Percentage Non-smokers in the Adult Population, by Region, Sex and Age, Canada, 1986

| | Region | | | | | |
|---|---|---|---|---|---|---|
| | Total | Atlantic | Quebec | Ontario | Prairies | British Columbia |
| ***Both Sexes*** | | | | | | |
| Total 15years and over | 67.2% | 65.3% | 62.2% | 69.6% | 66.7% | 73.7% |
| 15-19 years | 78.6 | 77.0 | 74.3 | 81.2 | 78.2 | 82.4 |
| 20-24 years | 63.1 | 60.4 | 57.5 | 66.8 | 63.5 | 66.5 |
| 25-44 years | 61.8 | 58.4 | 57.3 | 63.6 | 61.7 | 70.0 |
| 45-64 years | 66.3 | 65.6 | 61.3 | 68.6 | 64.6 | 73.1 |
| 65 years and over | 81.6 | 80.1 | 77.0 | 84.2 | 81.0 | 84.8 |
| 20 years and over | 66.0 | 63.8 | 61.0 | 68.4 | 65.4 | 72.9 |
| ***Males*** | | | | | | |
| Total 15 years and over | 63.2 | 60.7 | 58.0 | 65.5 | 62.5 | 71.0 |
| 15-19 years | 78.7 | 75.7 | 77.7 | 78.1 | 78.6 | 85.8 |
| 20-24 years | 63.2 | 60.1 | 58.0 | 66.4 | 61.9 | 70.1 |
| 25-44 years | 58.0 | 55.1 | 54.8 | 58.8 | 57.7 | 66.4 |
| 45-64 years | 60.7 | 58.7 | 53.5 | 64.3 | 58.7 | 68.9 |
| 65 years and over | 74.4 | 68.5 | 64.5 | 80.2 | 74.3 | 79.7 |
| 20 years and over | 61.5 | 58.6 | 55.9 | 64.1 | 60.6 | 69.5 |
| ***Females*** | | | | | | |
| Total 15 years and over | 71.1 | 69.8 | 66.1 | 73.5 | 70.8 | 76.4 |
| 15-19 years | 78.6 | 78.3 | 70.7 | 84.4 | 77.7 | 78.9 |
| 20-24 years | 63.1 | 60.8 | 56.9 | 67.3 | 65.2 | 62.8 |
| 25-44 years | 65.6 | 61.5 | 59.8 | 68.3 | 65.8 | 73.6 |
| 45-64 years | 71.7 | 72.3 | 68.5 | 72.8 | 70.3 | 77.3 |
| 65 years and over | 87.1 | 89.3 | 85.9 | 87.1 | 86.4 | 88.9 |
| 20 years and over | 70.4 | 68.7 | 65.7 | 72.5 | 70.0 | 76.1 |

## Table 25. Number of Non-smokers in the Adult Population, by Region, Sex, and Age, Canada, 1986

| | Region | | | | | |
|---|---|---|---|---|---|---|
| | Total | Atlantic | Quebec | Ontario | Prairies | British Columbia |
| ***Both Sexes*** | | | | | | |
| Total 15 years and over | 13 243 250 | 1 137 845 | 3 221 690 | 5 017 824 | 2 206 762 | 1 659 129 |
| 15-19 years | 1 473 134 | 151 647 | 342 181 | 553 205 | 259 268 | 166 833 |
| 20-24 years | 1 413 446 | 129 560 | 338 647 | 545 258 | 247 688 | 152 294 |
| 25-44 years | 5 053 257 | 409 145 | 1 273 340 | 1 854 678 | 872 488 | 643 606 |
| 45-64 years | 3 222 803 | 256 942 | 797 410 | 1 265 895 | 488 404 | 414 152 |
| 65 years and over | 2 080 609 | 190 550 | 470 112 | 798 788 | 338 914 | 282 245 |
| 20 years and over | 11 770 115 | 986 197 | 2 879 509 | 4 464 619 | 1 947 494 | 1 492 296 |
| ***Males*** | | | | | | |
| Total 15 years and over | 6 082 814 | 516 475 | 1 460 322 | 2 295 746 | 1 026 956 | 783 315 |
| 15-19 years | 753 632 | 76 286 | 182 614 | 272 334 | 133 572 | 88 826 |
| 20-24 years | 713 556 | 64 618 | 172 666 | 274 110 | 121 544 | 80 619 |
| 25-44 years | 2 353 398 | 190 100 | 605 031 | 843 942 | 411 841 | 302 486 |
| 45-64 years | 1 447 225 | 113 169 | 336 536 | 582 002 | 221 322 | 194 197 |
| 65 years and over | 815 002 | 72 303 | 163 474 | 323 359 | 138 678 | 117 188 |
| 20 years and over | 5 329 182 | 440 188 | 1 277 707 | 2 023 412 | 893 385 | 694 489 |
| ***Females*** | | | | | | |
| Total 15 years and over | 7 160 436 | 621 370 | 1 761 368 | 2 722 077 | 1 179 806 | 875 814 |
| 15-19 yearss | 719 503 | 75 361 | 159 567 | 280 871 | 125 696 | 78 007 |
| 20-24 years | 699 890 | 64 942 | 165 981 | 271 148 | 126 144 | 71 675 |
| 25-44 years | 2 699 858 | 219 046 | 668 309 | 1 010 736 | 460 647 | 341 120 |
| 45-64 years | 1 775 578 | 143 774 | 460 874 | 683 893 | 267 083 | 219 955 |
| 65 years and over | 1 265 607 | 118 247 | 306 637 | 475 429 | 200 235 | 165 057 |
| 20 years and over | 6 440 933 | 546 009 | 1 601 801 | 2 441 206 | 1 054 110 | 797 807 |

## Table 26. Percentage Non-smokers in the Adult Population, by Education, Sex and Region, Canada, 1986

| | Education | | | | | |
|---|---|---|---|---|---|---|
| | Total | 0-8 Years | Some Secondary and No Post-secondary | Some Post-secondary | Post-secondary Certificate or Diploma | University Degree |
| ***Both Sexes*** | | | | | | |
| Canada | 67.2% | 65.3% | 64.0% | 68.5% | 71.0% | 80.5% |
| Atlantic | 65.3 | 60.1 | 62.9 | 73.0 | 72.0 | 78.0 |
| Quebec | 62.2 | 59.0 | 59.6 | 65.2 | 68.6 | 72.0 |
| Ontario | 69.6 | 70.4 | 65.6 | 67.2 | 72.5 | 85.0 |
| Prairies | 66.7 | 69.8 | 62.6 | 67.4 | 68.6 | 78.8 |
| British Columbia | 73.7 | 74.6 | 70.3 | 75.3 | 75.8 | 85.4 |
| ***Males*** | | | | | | |
| Canada | 63.2 | 56.1 | 61.4 | 67.0 | 65.7 | 76.1 |
| Atlantic | 60.7 | 53.7 | 59.4 | 72.4 | 62.7 | 75.3 |
| Quebec | 58.0 | 49.0 | 57.5 | 67.5 | 67.7 | 63.3 |
| Ontario | 65.5 | 60.9 | 62.5 | 64.9 | 64.9 | 82.1 |
| Prairies | 62.5 | 59.9 | 59.6 | 60.5 | 65.0 | 75.8 |
| British Columbia | 71.0 | 66.7 | 69.1 | 77.7 | 65.9 | 81.1 |
| ***Females*** | | | | | | |
| Canada | 71.1 | 74.2 | 66.4 | 69.9 | 75.6 | 86.4 |
| Atlantic | 69.8 | 68.0 | 66.0 | 73.7 | 78.0 | 81.2 |
| Quebec | 66.1 | 68.1 | 61.5 | 63.2 | 69.5 | 83.8 |
| Ontario | 73.5 | 79.0 | 68.4 | 69.6 | 78.4 | 88.8 |
| Prairies | 70.8 | 80.1 | 65.3 | 73.9 | 72.1 | 82.8 |
| British Columbia | 76.4 | 83.8 | 71.3 | 73.0 | 84.1 | 90.9 |

## Table 27. Number of Non-smokers in the Adult Population, by Education, Sex and Region, Canada, 1986

| | Education | | | | | |
|---|---|---|---|---|---|---|
| | Total | 0-8 Years | Some Secondary and No Post-secondary | Some Post-secondary | Post-secondary Certificate or Diploma | University Degree |
| ***Both Sexes*** | | | | | | |
| Canada | 13 243 250 | 2 371 182 | 6 256 517 | 1 208 799 | 1 718 515 | 1 688 236 |
| Atlantic | 1 137 845 | 253 154 | 529 758 | 99 709 | 144 434 | 110 790 |
| Quebec | 3 221 690 | 790 255 | 1 400 582 | 220 485 | 461 253 | 349 114 |
| Ontario | 5 017 824 | 801 162 | 2 406 880 | 468 170 | 622 580 | 719 031 |
| Prairies | 2 206 762 | 329 527 | 1 068 009 | 228 169 | 296 334 | 284 723 |
| British Columbia | 1 659 129 | 197 084 | 851 288 | 192 265 | 193 915 | 224 578 |
| ***Males*** | | | | | | |
| Canada | 6 082 814 | 1 005 117 | 2 855 686 | 581 698 | 731 840 | 908 473 |
| Atlantic | 516 475 | 125 203 | 232 983 | 50 463 | 49 785 | 58 041 |
| Quebec | 1 460 322 | 312 508 | 639 218 | 107 232 | 225 013 | 176 351 |
| Ontario | 2 295 746 | 328 709 | 1 099 369 | 227 436 | 242 599 | 397 633 |
| Prairies | 1 026 956 | 143 295 | 488 447 | 99 900 | 137 336 | 157 979 |
| British Columbia | 783 315 | 95 402 | 395 669 | 96 667 | 77 107 | 118 469 |
| ***Females*** | | | | | | |
| Canada | 7 160 436 | 1 366 066 | 3 400 831 | 627 101 | 986 676 | 779 762 |
| Atlantic | 621 370 | 127 950 | 296 775 | 49 246 | 94 649 | 52 750 |
| Quebec | 1 761 368 | 477 748 | 761 364 | 113 254 | 236 240 | 172 762 |
| Ontario | 2 722 077 | 472 454 | 1 307 511 | 240 735 | 379 981 | 321 398 |
| Prairies | 1 179 806 | 186 232 | 579 562 | 128 269 | 158 998 | 126 744 |
| British Columbia | 875 814 | 101 682 | 455 619 | 95 597 | 116 808 | 106 108 |

## Table 28. Percentage of the Adult Population Who Never Smoked, by Education, Sex and Age, Canada, 1986

| | Education | | | | | |
|---|---|---|---|---|---|---|
| | Total | 0-8 Years | Some Secondary and No Post-secondary | Some Post-secondary | Post-secondary Certificate or Diploma | University Degree |
| ***Both Sexes*** | | | | | | |
| Total 15 years and over | 44.4% | 43.0% | 42.5% | 47.3% | 46.1% | 50.9% |
| 15-19 years | 70.8 | – | 70.9 | 70.8 | – | – |
| 20-24 years | 49.6 | 45.0 | 39.3 | 59.6 | 58.5* | 72.9 |
| 25-44 years | 39.1 | 36.6 | 33.7 | 36.4 | 44.1 | 53.6 |
| 45-64 years | 38.1 | 38.1 | 37.3 | 42.7 | 36.9 | 40.3 |
| 65 years and over | 49.3 | 49.8 | 49.9 | 49.1 | 50.8 | 36.8 |
| 20 years and over | 41.6 | 41.9 | 37.3 | 44.9 | 45.7 | 50.9 |
| ***Males*** | | | | | | |
| Total 15 years and over | 35.9 | 25.5 | 35.9 | 45.5 | 37.2 | 43.1 |
| 15-19 years | 70.8 | – | 70.7 | 80.0 | – | – |
| 20-24 years | 50.3 | 33.7 | 42.1 | 63.5 | 56.7* | 68.3 |
| 25-44 years | 33.7 | 26.5 | 28.5 | 34.0 | 37.3 | 47.7 |
| 45-64 years | 24.2 | 21.6 | 23.6 | 30.4 | 20.2 | 32.7 |
| 65 years and over | 24.4 | 23.8 | 24.4 | 29.5 | 29.0 | 21.9 |
| 20 years and over | 32.1 | 23.7 | 29.0 | 42.3 | 36.8 | 43.1 |
| ***Females*** | | | | | | |
| Total 15 years and over | 52.5 | 59.9 | 48.5 | 49.0 | 53.6 | 61.2 |
| 15-19 years | 70.8 | – | 71.2 | 63.2 | – | – |
| 20-24 years | 48.9 | 57.4 | 36.3 | 55.4 | 60.2* | 76.3 |
| 25-44 years | 44.4 | 46.5 | 38.5 | 38.8 | 50.3 | 61.1 |
| 45-64 years | 51.5 | 55.2 | 48.5 | 54.9 | 51.5 | 53.4 |
| 65 years and over | 68.0 | 72.4 | 66.0 | 60.5 | 61.3 | 64.2 |
| 20 years and over | 50.6 | 59.4 | 44.7 | 47.4 | 53.3 | 61.2 |

## Table 29. Percentage of the Adult Population Who Never Smoked, by Region, Sex and Age, Canada, 1986

| | Region | | | | | |
|---|---|---|---|---|---|---|
| | Total | Atlantic | Quebec | Ontario | Prairies | British Columbia |
| ***Both Sexes*** | | | | | | |
| Total 15 years and over | 44.4% | 43.2% | 40.3% | 47.1% | 43.5% | 47.2% |
| 15-19 | 70.8 | 71.4 | 67.7 | 73.4 | 69.2 | 71.4 |
| 20-24 | 49.6 | 47.9 | 45.0 | 52.7 | 49.1 | 53.0 |
| 25-44 | 39.1 | 39.1 | 35.3 | 34.6 | 41.8 | 46.0 |
| 45-64 | 38.1 | 37.2 | 34.8 | 41.1 | 36.5 | 38.7 |
| 65 years and over | 49.3 | 49.0 | 47.5 | 51.6 | 49.3 | 46.1 |
| ***Males*** | | | | | | |
| Total 15 years and over | 35.9 | 34.5 | 31.9 | 38.4 | 35.8 | 38.6 |
| 15-19 | 70.8 | 69.7 | 73.7 | 69.6 | 69.5 | 71.3 |
| 20-24 | 50.3 | 49.9 | 45.9 | 53.2 | 48.5 | 54.8 |
| 25-44 | 33.7 | 30.3 | 30.5 | 35.7 | 32.5 | 39.5 |
| 45-64 | 24.2 | 23.5 | 18.0 | 27.6 | 24.6 | 27.4 |
| 65 years and over | 24.4 | 18.7 | 17.0 | 29.9 | 27.8 | 21.7 |
| ***Females*** | | | | | | |
| Total 15 years and over | 52.5 | 51.6 | 48.2 | 55.4 | 51.1 | 55.4 |
| 15-19 | 70.8 | 73.2 | 61.4 | 77.4 | 68.8 | 71.4 |
| 20-24 | 48.9 | 45.7 | 44.0 | 52.2 | 49.7 | 51.3 |
| 25-44 | 44.4 | 40.1 | 38.6 | 47.7 | 43.8 | 52.4 |
| 45-64 | 51.5 | 50.4 | 50.4 | 54.1 | 48.5 | 49.9 |
| 65 years and over | 68.0 | 73.2 | 69.1 | 67.6 | 66.5 | 65.5 |

## Table 30. Percentage of the Adult Population Who Never Smoked, by Education, Sex, and Region, Canada, 1986

| | Education | | | | | |
|---|---|---|---|---|---|---|
| | Total | 0-8 Years | Some Secondary and No Post-secondary | Some Post-secondary | Post-secondary Certificate or Diploma | University Degree |
| ***Both Sexes*** | | | | | | |
| Canada | 44.4% | 43.0% | 42.5% | 47.3% | 46.1% | 50.9% |
| Atlantic | 43.0 | 35.8 | 43.3 | 51.7 | 46.8 | 51.1 |
| Quebec | 40.3 | 37.2 | 39.8 | 46.4 | 43.1 | 42.8 |
| Ontario | 47.1 | 51.1 | 44.2 | 45.8 | 47.8 | 54.5 |
| Prairies | 43.5 | 46.4 | 40.9 | 44.3 | 42.6 | 52.4 |
| British Columbia | 47.2 | 42.8 | 44.3 | 54.2 | 53.4 | 52.1 |
| ***Males*** | | | | | | |
| Canada | 35.9 | 25.5 | 35.9 | 45.5 | 37.2 | 43.1 |
| Atlantic | 34.5 | 23.1 | 36.7 | 49.4 | 34.0 | 44.2 |
| Quebec | 31.9 | 19.8 | 34.2 | 52.4 | 36.1 | 33.7 |
| Ontario | 38.4 | 31.3 | 36.9 | 43.8 | 39.3 | 46.9 |
| Prairies | 35.8 | 29.1 | 35.3 | 34.6 | 34.9 | 47.9 |
| British Columbia | 38.6 | 27.3 | 37.1 | 54.1 | 40.1 | 41.3 |
| ***Females*** | | | | | | |
| Canada | 52.5 | 59.9 | 48.5 | 49.0 | 53.6 | 61.2 |
| Atlantic | 51.6 | 51.5 | 49.1 | 54.2 | 55.2 | 59.4 |
| Quebec | 48.2 | 52.9 | 44.9 | 41.2 | 49.8 | 55.2 |
| Ontario | 55.4 | 69.0 | 51.1 | 47.7 | 54.4 | 64.8 |
| Prairies | 51.1 | 64.3 | 46.2 | 53.6 | 50.0 | 58.5 |
| British Columbia | 55.4 | 61.1 | 50.7 | 54.3 | 64.6 | 65.6 |

# Appendix II – Technical Notes on Methods

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**Labour Force Smoking Survey**

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# LABOUR FORCE SMOKING SURVEY

## Background

Since 1964, the Department of Health and Welfare has collected information relating to the smoking behaviour of Canadians through supplements to the Canadian Labour Force Survey. The Canadian Labour Force Survey (LFS) is the largest continuing household survey conducted by Statistics Canada.

The survey is conducted on a monthly basis and covers the population age 15 years and over in the 10 provinces of Canada. The survey sampling frame excludes the Yukon and Northwest Territories, populations living on Indian reserves and Crown lands, inmates of institutions and members of the armed forces. The population in excluded areas accounts for approximately 3% of the total population of Canada.

## Sample Selection

The sample is a complex multi-stage probability sample of dwellings. Approximately 56 000 dwellings are sampled each month. Households within the selected dwellings are sampled each month for six cvonsecutive months. All members of the household who fit the criteria for participation are interviewed. The participating households are divided into six panels. Each month, a new panel is rotated into the sample and in its sixth month is rotated out. Each panel is a representative sample of the population. This rotation is done to minimize the non-response that occur if respondents were asked to remain in the survey for a longer period of time. The Smoking Behaviour of Canadians Survey was conducted on a subsample of the LFS sample. Two rotations of the LFS were surveyed. This sample procedure resulted in the selection of 30 799 individuals. The survey achieved a 95% response rate.

Table A provides information on the sample size of the LFS smoking supplement by age, sex and province. Although the sample size of this survey is larger than most smoking surveys conducted in Canada, the sample size may not be sufficient to make reliable estimates of certain population parameters (i.e. smoking estimates in specialized occupational groups). The complex design of the Labour Force Survey has the effect of making the standard errors of estimates somewhat larger than they would be from a simple random sample of the same size using the same procedures. This "design effect" of the survey is taken into account for the release of estimates in this report. Researchers who plan to conduct more extensive analysis of the data base are advised to review the LFS methodology or to seek the advice of the Special Surveys Group at Statistics Canada as the design effect is needed for the calculation of statistical tests. A more complete description of the Labour Force Survey mehtodology may be found in published reports.[22-24]

**Table A. Sample Size of the 1986 Labour Force Survey Smoking Supplement, by Province, Sex and Age**

| | Canada | Province | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Total | Nfld. | P.E.I. | N.S. | N.B. | Que. | Ont. | Man. | Sask. | Alta. | B.C. |
| ***Both sexes*** | | | | | | | | | | | |
| Total 15 years and over | 30 799 | 2 053 | 990 | 2 375 | 2 566 | 4 793 | 5 786 | 2 233 | 2 921 | 4 140 | 2 942 |
| 15-19 years | 3 090 | 300 | 79 | 253 | 308 | 445 | 562 | 215 | 260 | 402 | 266 |
| 20-24 years | 3 239 | 224 | 110 | 237 | 259 | 535 | 647 | 225 | 305 | 435 | 262 |
| 25-44 years | 12 887 | 849 | 437 | 935 | 1 031 | 2 141 | 2 362 | 858 | 1 157 | 1 859 | 1 258 |
| 45-64 years | 7 448 | 453 | 215 | 538 | 624 | 1 183 | 1 464 | 571 | 716 | 953 | 731 |
| 65 years and over | 4 135 | 227 | 149 | 412 | 344 | 489 | 751 | 364 | 483 | 491 | 425 |
| 20 years and over | 27 709 | 1 753 | 911 | 2 122 | 2 258 | 4 348 | 5 224 | 2 018 | 2 661 | 3 738 | 2 676 |
| ***Males*** | | | | | | | | | | | |
| Total 15 years and over | 14 959 | 1 040 | 486 | 1 127 | 1 236 | 2 352 | 2 783 | 1 077 | 1 414 | 2 033 | 1 411 |
| 15-19 years | 1 563 | 151 | 44 | 124 | 158 | 231 | 276 | 112 | 132 | 205 | 130 |
| 20-24 years | 1 515 | 121 | 49 | 117 | 121 | 245 | 309 | 109 | 137 | 191 | 116 |
| 25-44 years | 6 335 | 414 | 215 | 444 | 511 | 1 073 | 1 151 | 419 | 571 | 927 | 610 |
| 45-64 years | 3 697 | 241 | 108 | 271 | 293 | 583 | 723 | 280 | 353 | 488 | 357 |
| 65 years and over | 1 849 | 113 | 70 | 171 | 153 | 220 | 324 | 157 | 221 | 222 | 198 |
| 20 years and over | 13 396 | 889 | 442 | 1 003 | 1 078 | 2 121 | 2 507 | 965 | 1 282 | 1 828 | 1 281 |
| ***Females*** | | | | | | | | | | | |
| Total 15 years and over | 15 840 | 1 013 | 504 | 1 248 | 1 330 | 2 441 | 3 003 | 1 156 | 1 507 | 2 107 | 1 531 |
| 15-19 years | 1 527 | 149 | 35 | 129 | 150 | 214 | 286 | 103 | 128 | 197 | 136 |
| 20-24 years | 1 724 | 103 | 61 | 120 | 138 | 290 | 338 | 116 | 168 | 244 | 146 |
| 25-44 years | 6 552 | 435 | 222 | 491 | 520 | 1 068 | 1 211 | 439 | 586 | 932 | 648 |
| 45-64 years | 3 751 | 212 | 107 | 267 | 331 | 600 | 741 | 291 | 363 | 465 | 374 |
| 65 years and over | 2 286 | 114 | 79 | 241 | 191 | 269 | 427 | 207 | 262 | 269 | 227 |
| 20 years and over | 14 313 | 864 | 469 | 1 119 | 1 180 | 2 227 | 2 717 | 1 053 | 1 379 | 1 910 | 1 395 |

## Collection and Processing of Data

Upon identification of selected dwellings, the first contact with persons in the dwelling is by a personal visit. The interviewers are allowed to accept responses about all eligible members of the household from any responsible member of the household. If no eligible person is present or agreeable to respond to the interviewer's questions, the interviewer arranges to call back later in the week in an attempt to elicit a response. In rural areas, telephone callbacks may be employed to reduce administrative costs.

All interviews are conducted by a pool of experienced interviewers. In addition to their experience and training in the general conduct of interviews, they were specifically trained in the subject matter of the smoking survey.

The work of interviewers is monitored by means of periodic observation and by re-interview. To monitor and control the quality of data entry, verification of the data entry operation is undertaken on a 100% or on a sample basis. Data processing involves a set of checks for logical validity and consistency in responses where socio-demographic characteristics are known from previous visits to the household. In cases where respondents refuse to answer questions, data for non-responding units may be imputed using data from responding units or some earlier data on the non-responding units. Imputation can lead to a bias if the characteristics of responding units differ from those of the non-responding units. Attempts are made to obtain as high a response rate as possible to reduce the need for imputation.

As noted earlier, the smoking survey achieved a response rate of 95%. The 5% non-response rate does not include a further 2% of households for which there was no response to the Labour Force Survey as well and information could not be imputed from household records in previous months. Virtually nothing is known about the characteristics of persons living in these households. These households are not included in the figures below.

**Table B. Response Rates, 1986 Smoking Behaviour of Canadians Survey, by Selected Characteristics of Sample**

| Age | Rate |
|---|---|
| 15-19 | 94.4% |
| 20-24 | 94.7 |
| 25-34 | 95.9 |
| 35-44 | 95.2 |
| 45-54 | 94.3 |
| 55-64 | 94.1 |
| 65+ | 94.7 |
| **Sex** | |
| Male | 95.4% |
| Female | 94.8 |

## Estimation Procedures

The Labour Force Survey is a complex multistage probability sample. Therefore, it is necessary to reflect the complex procedures in the derivation of estimates. The estimates presented in this report are based upon 1986 sample person counts weighted to produce national estimates. The weight for each sample person is the product of four component weights:

1. ***Probability of selection***

   The basic weight for each person is obtained by multiplying the reciprocals of the probabilities of selection at each step in the design: census tracts, dwellings and households.

2. ***Household non-response adjustment within this segment***

   In the Labour Force Survey, interviews are completed in about 93% of all eligible households. Because of household non-response, a weighting adjustment is required. The non-response adjustment weight is a ratio with the number of households in a sample segment as the numerator and the number of households actually interviewed in that segment as the denominator. This adjustment reduces bias in an estimate to the extent that persons in the non-interviewed household have the same characteristics as the persons in the interviewed households in the same segment.

3. ***First-stage ratio adjustment***

   The sample design determines a set of basic rates to be applied to each record referring to persons in the sample. This is called the basic weighting factor. The sample design is such that within the same province and same type of area, the basic weights are identical (except where specified) for each record (person) in the sample and are equal to the inverse of the sampling ratio.

4. ***Post-stratification by age-sex-rural/urban-province***

   Information relating to the total population by age, sex and distribution is available through the census. Using the selected primary sampling units only, and dividing their most recent rural and urban census populations by the known probability of selection yields a sample estimate of the rural or urban population for each province. Comparisons by province, with the actual census counts, indicate whether the selected primary sampling units over- or under-represent the respective areas.

## Reliability of Estimates

Data from sample surveys are subject to error from a number of sources. Two basic types of error are sampling and non-sampling errors. The first of these arises because the sample does not include every unit in the population and hence leads to a degree of uncertainty in any estimate derived from the sample. The difference between the estimates obtained from the sample and the results from a complete count taken under similar conditions is called the *sampling error* of the estimate.

Although the exact value of the error of a sample estimate cannot be known from sample results alone, it is possible to estimate a statistical measure of sampling error, the *standard error*, from the sample data. The size of this error is strongly related to the variability of the particular characteristic under study and the sample size upon which an estimate is based. From the properties of the normal curve, the chances are about 68 out of 100 that the difference would be less than one standard error, 95 out of a hundred that the difference would be less than two standard errors, and virtually certain that the difference would be less than three standard errors.

Because of the large variety of estimates that can be produced from a survey, the standard error is usually expressed relative to the estimate to which it pertains. The resulting measure, known as the *coefficient of variation* of an estimate, is obtained by dividing the standard error of the estimate by the estimate itself and is expressed as a percentage of the estimate.[25]

Derivation of sampling variabilities for each of the estimates which could be generated from the Labour Force Smoking Survey would be very costly, and for the needs of most users unnecessary. Consequently, crude measures of sampling variability have been developed for use (Table C). This table has been produced using a modification of the coefficient of variation formula based on a simple random sample. Because the LFS Smoking Survey is based on a multi-stage design, a factor called the design effect was introduced into the formula. This factor takes into account the increase in variance that results from using a complex design rather than a simple random sample.

The following guidelines should enable the reader to determine approximate coefficients of variation for aggregates (totals), percentages, ratios, differences between totals or percentages, and differences between ratios.

1. ***Estimates of Aggregates (Totals)***

   The coefficient of variation for totals depends only on the size of the estimated total itself. On Table C locate the estimated total (in thousands) in the left-most column of the table (headed Numerator of Percentage) and follow the asterisks across to the first figure encountered. This is the coefficient of variation.

2. ***Estimates of Percentages***

   The coefficient of variation of an estimated percentage depends on the size of the percentage and the size of the group upon which the percentage is based. Estimated percentages are relatively more reliable than the corresponding estimates of the numerators of the percentages, particularly if the percentages are 50 percent or more. To estimate the coefficient of variation of a percentage, reference should be made to the percentage (across the top of the table) and to the numerator of the percentage, in thousands (down the left side of the table). The intersection of the appropriate row and column gives the appropriate coefficient of variation.

## Table C. Crude Sampling Variability Table for the Labour Force Survey on Smoking, Canada, 1986

| Numerator of Percentage ('000) | Estimated Percentage | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0.1% | 1.0% | 2.0% | 5.0% | 10.0% | 15.0% | 20.0% | 25.0% | 30.0% | 35.0% | 40.0% | 50.0% | 70.0% | 90.0% |
| 1 | 129.3 | 125.7 | 125.1 | 123.1 | 119.9 | 116.5 | 113.0 | 109.4 | 105.7 | 101.9 | 97.9 | 89.3 | 69.2 | 40.0 |
| 2 | 89.3 | 88.9 | 88.4 | 87.1 | 84.7 | 82.4 | 79.9 | 77.4 | 74.7 | 72.0 | 69.2 | 63.2 | 48.9 | 28.2 |
| 3 | 72.9 | 72.6 | 72.2 | 71.1 | 69.2 | 67.2 | 65.2 | 63.2 | 61.0 | 58.8 | 56.5 | 51.6 | 40.0 | 23.1 |
| 4 | 63.1 | 62.9 | 62.5 | 61.6 | 59.9 | 58.2 | 56.5 | 54.7 | 52.9 | 50.9 | 48.9 | 44.7 | 34.6 | 20.0 |
| 5 | 56.5 | 56.2 | 55.9 | 55.1 | 53.6 | 52.1 | 50.5 | 48.9 | 47.3 | 45.6 | 43.8 | 40.0 | 30.9 | 17.9 |
| 6 | 51.6 | 51.3 | 51.1 | 50.3 | 48.9 | 47.6 | 46.1 | 44.7 | 43.2 | 41.6 | 40.0 | 36.5 | 28.2 | 16.3 |
| 7 | 47.7 | 47.5 | 47.3 | 46.5 | 45.3 | 44.0 | 42.7 | 41.4 | 40.0 | 38.5 | 37.0 | 33.8 | 26.2 | 15.1 |
| 8 | 44.6 | 44.4 | 44.2 | 43.5 | 42.4 | 41.2 | 40.0 | 38.7 | 37.4 | 36.0 | 34.6 | 31.6 | 24.5 | 14.1 |
| 9 | 42.1 | 41.9 | 41.7 | 41.0 | 40.0 | 38.8 | 37.7 | 36.5 | 35.2 | 34.0 | 32.6 | 29.8 | 23.1 | 13.3 |
| 10 | 39.9 | 39.8 | 39.6 | 38.9 | 37.9 | 36.8 | 35.7 | 34.6 | 33.4 | 32.2 | 30.9 | 28.2 | 21.8 | 12.6 |
| 11 | 38.1 | 37.9 | 37.7 | 37.1 | 36.1 | 35.1 | 34.1 | 33.0 | 31.9 | 30.7 | 29.5 | 26.9 | 20.9 | 12.0 |
| 12 | 36.5 | 36.3 | 36.1 | 35.5 | 34.6 | 33.6 | 32.6 | 31.6 | 30.5 | 29.4 | 28.2 | 25.8 | 20.0 | 11.5 |
| 13 | 35.0 | 34.9 | 34.7 | 34.2 | 33.2 | 32.3 | 31.3 | 30.3 | 29.3 | 28.2 | 27.1 | 24.8 | 19.2 | 11.1 |
| 14 | 33.7 | 33.6 | 33.4 | 32.9 | 32.0 | 31.1 | 30.2 | 29.2 | 28.2 | 27.2 | 26.2 | 23.9 | 18.5 | 10.7 |
| 15 | 32.6 | 32.5 | 32.3 | 31.8 | 30.9 | 30.1 | 29.2 | 28.2 | 27.3 | 26.3 | 25.3 | 23.1 | 17.9 | 10.3 |
| 16 | 31.6 | 31.4 | 31.3 | 30.8 | 30.0 | 29.1 | 28.2 | 27.4 | 26.4 | 25.5 | 24.5 | 22.3 | 17.3 | 10.0 |
| 17 | 30.6 | 30.5 | 30.3 | 29.9 | 29.1 | 28.2 | 27.4 | 26.5 | 25.6 | 24.7 | 23.7 | 21.7 | 16.8 | 9.7 |
| 18 | 29.8 | 29.6 | 29.5 | 29.0 | 28.2 | 27.5 | 26.6 | 25.8 | 24.9 | 24.0 | 23.1 | 21.1 | 16.3 | 9.4 |
| 19 | 29.0 | 28.8 | 28.7 | 28.2 | 27.5 | 26.7 | 25.9 | 25.1 | 24.2 | 23.4 | 22.5 | 20.5 | 15.9 | 9.2 |
| 20 | ******** | 28.1 | 28.0 | 27.5 | 26.8 | 26.0 | 25.3 | 24.5 | 23.6 | 22.8 | 21.9 | 20.0 | 15.5 | 8.9 |
| 21 | ******** | 27.4 | 27.3 | 26.9 | 26.2 | 25.4 | 24.7 | 23.9 | 23.1 | 22.2 | 21.4 | 19.5 | 15.1 | 8.7 |
| 22 | ******** | 26.8 | 26.7 | 26.3 | 25.6 | 24.8 | 24.1 | 23.3 | 22.5 | 21.7 | 20.9 | 19.0 | 14.8 | 8.5 |
| 23 | ******** | 26.2 | 26.1 | 25.7 | 25.0 | 24.3 | 23.6 | 22.8 | 22.0 | 21.2 | 20.4 | 18.6 | 14.4 | 8.3 |
| 24 | ******** | 25.7 | 25.5 | 25.1 | 24.5 | 23.8 | 23.1 | 22.3 | 21.6 | 20.8 | 20.0 | 18.2 | 14.1 | 8.2 |
| 25 | ******** | 25.1 | 25.0 | 24.6 | 24.0 | 23.3 | 22.6 | 21.9 | 21.1 | 20.4 | 19.6 | 17.9 | 13.8 | 8.0 |
| 30 | ******** | 23.0 | 22.9 | 22.5 | 21.9 | 21.3 | 20.9 | 20.0 | 19.3 | 18.6 | 17.9 | 16.3 | 12.6 | 7.3 |
| 35 | ******** | 21.2 | 21.1 | 20.8 | 20.3 | 19.7 | 19.1 | 18.5 | 17.9 | 17.2 | 16.5 | 15.1 | 11.7 | 6.8 |
| 40 | ******** | 19.9 | 19.8 | 19.5 | 19.0 | 18.4 | 17.9 | 17.3 | 16.7 | 16.1 | 15.5 | 14.1 | 10.9 | 6.3 |
| 45 | ******** | 18.7 | 18.6 | 18.4 | 17.8 | 17.4 | 16.8 | 16.3 | 15.8 | 15.2 | 14.6 | 13.3 | 10.3 | 6.0 |
| 50 | ******** | 17.8 | 17.7 | 17.4 | 16.9 | 16.5 | 16.0 | 15.5 | 14.9 | 14.4 | 13.8 | 12.6 | 9.8 | 5.6 |
| 55 | ******** | 16.9 | 16.9 | 16.6 | 16.2 | 15.7 | 15.2 | 14.8 | 14.3 | 13.7 | 13.2 | 12.0 | 9.3 | 5.4 |
| 60 | ******** | 16.2 | 16.1 | 15.9 | 15.5 | 15.0 | 14.6 | 14.1 | 13.6 | 13.1 | 12.6 | 11.5 | 8.9 | 5.2 |
| 65 | ******** | 15.6 | 15.5 | 15.3 | 14.9 | 14.4 | 14.0 | 13.6 | 13.1 | 12.6 | 12.1 | 11.1 | 8.6 | 5.0 |
| 70 | ******** | 15.0 | 14.9 | 14.7 | 14.3 | 13.9 | 13.5 | 13.1 | 12.6 | 12.2 | 11.7 | 10.7 | 8.3 | 4.8 |
| 75 | ******** | 14.5 | 14.4 | 14.2 | 13.8 | 13.4 | 13.0 | 12.6 | 12.2 | 11.8 | 11.3 | 10.3 | 8.0 | 4.6 |
| 80 | ******** | 14.1 | 14.0 | 13.8 | 13.4 | 13.0 | 12.6 | 12.2 | 11.8 | 11.4 | 10.9 | 10.0 | 7.7 | 4.5 |
| 85 | ******** | 13.6 | 13.6 | 13.4 | 13.0 | 12.6 | 12.3 | 11.9 | 11.5 | 11.0 | 10.6 | 9.7 | 7.5 | 4.3 |
| 90 | ******** | 13.3 | 13.2 | 13.0 | 12.6 | 12.3 | 11.9 | 11.5 | 11.1 | 10.7 | 10.3 | 9.4 | 7.3 | 4.2 |
| 95 | ******** | 12.9 | 12.8 | 12.6 | 12.3 | 12.0 | 11.6 | 11.2 | 10.8 | 10.5 | 10.0 | 9.2 | 7.1 | 4.1 |
| 100 | ******** | 12.6 | 12.5 | 12.3 | 12.0 | 11.8 | 11.3 | 10.9 | 10.6 | 10.2 | 9.8 | 8.9 | 6.9 | 4.0 |
| 125 | ******** | 11.2 | 11.2 | 11.0 | 10.7 | 10.4 | 10.1 | 9.8 | 9.5 | 9.1 | 8.8 | 8.0 | 6.2 | 3.6 |
| 150 | ******** | 10.3 | 10.2 | 10.1 | 9.8 | 9.5 | 9.2 | 8.9 | 8.6 | 8.3 | 8.0 | 7.3 | 5.6 | 3.3 |
| 200 | ********** | 8.8 | 8.7 | 8.5 | 8.2 | 8.0 | 7.7 | 7.5 | 7.2 | 6.9 | 6.3 | 4.9 | 2.8 | |
| 250 | ********** | 7.9 | 7.8 | 7.6 | 7.4 | 7.1 | 6.9 | 6.7 | 6.4 | 6.2 | 5.6 | 4.4 | 2.5 | |
| 300 | ********** | 7.2 | 7.1 | 6.9 | 6.7 | 6.5 | 6.3 | 6.1 | 5.9 | 5.6 | 5.2 | 4.0 | 2.3 | |
| 350 | ********** | 6.7 | 6.6 | 6.4 | 6.2 | 6.0 | 5.8 | 5.6 | 5.4 | 5.2 | 4.8 | 3.7 | 2.1 | |
| 400 | ********** | 6.2 | 6.0 | 5.8 | 5.6 | 5.5 | 5.3 | 5.1 | 4.9 | 4.5 | 3.5 | 2.0 | | |
| 450 | ********** | 5.8 | 5.6 | 5.5 | 5.3 | 5.2 | 5.0 | 4.8 | 4.6 | 4.2 | 3.3 | 1.9 | | |
| 500 | ********** | 5.5 | 5.4 | 5.2 | 5.1 | 4.9 | 4.7 | 4.6 | 4.4 | 4.0 | 3.1 | 1.8 | | |
| 750 | ********** | 4.5 | 4.4 | 4.3 | 4.1 | 4.0 | 3.9 | 3.7 | 3.6 | 3.3 | 2.5 | 1.5 | | |
| 1000 | ********** | 3.9 | 3.7 | 3.6 | 3.5 | 3.3 | 3.2 | 3.1 | 2.8 | 2.2 | 1.3 | | | |
| 1500 | ********** | 3.1 | 3.0 | 2.9 | 2.8 | 2.7 | 2.6 | 2.5 | 2.3 | 1.8 | 1.0 | | | |
| 2000 | ********** | 2.6 | 2.5 | 2.4 | 2.4 | 2.3 | 2.2 | 2.0 | 1.5 | 0.9 | | | | |
| 3000 | ********** | 2.1 | 2.0 | 1.9 | 1.9 | 1.8 | 1.8 | 1.3 | 0.7 | | | | | |
| 4000 | ********** | 1.7 | 1.7 | 1.6 | 1.5 | 1.4 | 1.1 | 0.8 | | | | | | |
| 5000 | ********** | 1.5 | 1.4 | 1.4 | 1.3 | 1.0 | 0.8 | | | | | | | |
| 6000 | ********** | 1.3 | 1.3 | 1.2 | 0.9 | 0.5 | | | | | | | | |
| 7000 | ********** | 1.2 | 1.1 | 0.8 | 0.5 | | | | | | | | | |
| 8000 | ********** | 1.0 | 0.8 | 0.4 | | | | | | | | | | |
| 9000 | ********** | 0.9 | 0.7 | 0.4 | | | | | | | | | | |
| 10000 | ********** | 0.7 | 0.4 | | | | | | | | | | | |

**Notes:** (1) Sampling variabilities (coefficients of variation) are in percents.

(2) To determine sampling variabilities for estimates of totals, locate the row closest to the estimated total. The left-most column gives sampling variability.

(3) To determine sampling variabilities for estimates of percentages, use the row closest to the numerator of the percentage and the column closest to the percentage.

3. ***Ratios***

In the case where the numerator is a subset of the denominator, the ratio should be converted to a percentage and the procedure for percentages applied. In the case where the numerator is not a subset of the denominator, the coefficient of variation of the ratio of the two estimates is approximately equal to the square root of the sum of squares of each coefficient of variation considered separately; that is, the coefficient of variation of the ratio:

This formula will tend to overstate the error if X and Y are positively correlated and understate the error if X and Y are negatively correlated.

$$R = \frac{X}{Y} \quad \text{is} \quad cv(R) = \sqrt{cv(X)^2 + cv(Y)^2}$$

4. ***Differences Between Totals or Percentages***

The standard deviation of a difference between two estimates is approximately equal to the square root of the sum of squares of each standard deviation considered separately. That is, the standard deviation of a difference:

This formula is accurate for the difference between separate and uncorrelated characteristics but is only approximate otherwise.

$$d = X - Y$$

$$sd\,(d) = \sqrt{[X\,cv(X)]^2 + [Y\,cv(Y)]^2}$$

The coefficient of variation is approximately

$$cv(d) = \frac{sd(d)}{d}$$

5. ***Difference of Ratios***

In this case, procedures 3 and 4 are combined. The coefficients of variation for the two ratios are first determined using procedure 3, and then the coefficient of variation of their differences is found using procedure 4.

Where the numbers estimated are large, the margin of error is generally low. Small estimates are more prone to error. Where the quantity estimated has a coefficient of variation exceeding 25%, it is not regarded as being of sufficient precision to be published. The symbol -- is given in tables where this occurs. Where the coefficient of variation is between 16.5% and 25%, the estimate should be interpreted with caution. Such estimates are noted with the symbol.*

## Non-sampling Error

Non-sampling errors cover all other sources of errors. They may arise from a wide range of sources and include errors due to coverage, measurement, non-response, proxy response, and editing, imputation, and estimation procedures.

The smoking rates of adolescents are a particular concern as this group represents a primary target group for health promotion programs. In surveys prior to 1981, no attempt was made to measure or control proxy response (i.e. asking a member of a household to respond on behalf of an absent person). In the 1981 and 1983 surveys, a column at the end of the questionnaire coded whether the survey schedule was based on proxy or non-proxy data. Since the proportion of responses that was based on proxy information constituted about 75% of all responses in the 1983 survey, we attempted to reduce proxy response in the 1986 survey. In the 1986 survey, interviewers were instructed to ask the smoking questions directly to household members who were available to provide information. If a member of the household was not present, a follow-up telephone call was made to obtain information directly from the person concerned. A proxy response was allowed only if the individual was not available or the initial household respondent insisted on answering on behalf of other household members. If a proxy interview was conducted, questions which related to attitudes toward the restriction of smoking in various settings were not asked. However, in certain cases proxy response was permitted for behavioural data.

Table D presents data relating to the proportion of estimates that were based on proxy and self-reported data and the estimates of regular smoking associated with proxy/non-proxy response. Approximately 30% of the smoking estimates were based on proxy response. Proxy response was more likely for males (38%) than for females (22%). This pattern was apparent for all age groups. In general, proxy response resulted in smoking prevalence estimates that were lower than estimates based on self-reporting. However, in the 25-44 and 65 and older age groups proxy response was slightly more likely to yield estimates that were higher than those based on self-reporting. The effects of proxy reporting are most apparent for those below age 25 and for females in all age groups. Comparison of self-reported estimates with estimates based on combined proxy/non-proxy data suggest that in the total population, self-reported data would yield estimates of smoking that are 1.1% higher for the population over age 15, and up to 4.7% higher for the 15-19 age group.

Among males age 15 years and over, self-reported estimates are 0.7% higher than those based on combined proxy/non-proxy data. In the 15-19 and 20-24 age groups, estimates are 2.3% and 2.0% higher. Among females, self-reported data would produce estimates that are 1.8% higher than those based on combined data for the population 15 years and older, 7.1% higher for the 15-19 age group and 2.4% higher for the 20-24 group.

**Table D. Proportion of Sample Responses Based on Proxy Information, Comparison of Regular Smoking Estimates Based on Proxy, Non-Proxy Response, and Ratio of Non-proxy/proxy Estimates, by Age and Sex, Labour Force Survey, 1986**

| Age Groups | Proportion of Estimate Based on Proxy Data | Percent Regular Smokers | | | Ratio |
|---|---|---|---|---|---|
| | | Proxy | Self-report | Total | Self-report/Proxy |
| ***Both sexes*** | | | | | |
| 15 years and over | 30.% | 26.0% | 29.3% | 28.2% | 1.13 |
| 15-19 | 53 | 13.5 | 22.3 | 17.6 | 1.65 |
| 20-24 | 38 | 28.2 | 33.9 | 31.7 | 1.20 |
| 25-44 | 25 | 32.2 | 31.7 | 33.4 | .98 |
| 45-64 | 27 | 29.2 | 29.5 | 29.4 | 1.01 |
| 65 years and over | 22 | 14.5 | 14.4 | 14.4 | .99 |
| ***Males*** | | | | | |
| 15 years and over | 38 | 29.7 | 31.5 | 30.8 | 1.06 |
| 15-19 | 54 | 15.2 | 19.7 | 17.4 | 1.30 |
| 20-24 | 46 | 29.1 | 33.3 | 31.3 | 1.14 |
| 25-44 | 35 | 35.9 | 35.4 | 35.4 | .99 |
| 45-64 | 36 | 32.7 | 34.1 | 33.6 | 1.07 |
| 65 years and over | 31 | 19.2 | 18.1 | 18.6 | .94 |
| ***Females*** | | | | | |
| 15 years and over | 22 | 19.7 | 27.6 | 25.8 | 1.40 |
| 15-19 | 53 | 11.6 | 24.9 | 17.8 | 2.15 |
| 20-24 | 31 | 26.7 | 34.4 | 32.0 | 1.29 |
| 25-44 | 16 | 24.6 | 32.8 | 31.4 | 1.33 |
| 45-64 | 18 | 22.0 | 26.1 | 25.3 | 1.18 |
| 65 years and over | 16 | 6.8 | 12.2 | 11.3 | 1.79 |

It is difficult to assess the overall impact of proxy response on the survey estimates. In some instances, proxy reporting may under-estimate the prevalence of smoking in a group. This may be a problem for the youngest age groups as proxy respondents may not be aware of the smoking behaviour of the person for whom they are reporting.[26] On the other hand, proxy response may provide a more accurate picture of current smoking status in some groups, particularly where there are social pressures operating against self-reports of a behaviour that is regarded as negative. Attempts to totally eliminate proxy response from the LFS smoking survey would have both cost and survey administration implications. Even if proxy response was eliminated, it would not guarantee more valid data relating to the smoking estimates for younger age groups. Interviewer-administered questionnaires in the households, telephone followup, or mailback questionnaires could all be expected to produce their own biases. In addition, if the survey accepts self-reported data only from the teenagers who are

present at the time of the household interview, it is possible that these adolescents may have different characteristics from those who are not available. Another potential problem with smoking data is the degree of under-reporting that may have occurred over time. To date, few Canadian surveys of smoking behaviour have attempted to validate smoking behaviour through other objective measure. The preceding discussion is intended to alert users of the LFS smoking data to potential sources of bias.

## Questionnaires and Data Collection

The data presented in this report are based on two survey schedules: the Canadian Labour Force Survey and the Smoking Behaviour of Canadians Survey. The Labour Force Survey interview schedule collects socio-demographic data, and information relating to current work status, including efforts to find work, number of hours worked, type of occupation, absences from work, etc. The Smoking Survey asked questions relating to smoking history, current smoking status, frequency of smoking, tar/nicotine content of cigarette smoked, and type of cigarette smoked. These questions correspond to the conventional smoking questions on previous Labour Force Survey supplements. Additional questions were placed on the smoking survey to provide some statistical data on the exposure of workers to smoke in occupational settings, to measure the prevalence of restrictions on smoking in the workplace and to assess employee attitudes toward the issue of smoking in the workplace. Questions were also added to assess public attitudes toward the restriction of smoking in public settings and to measure the use of smokeless tobacco products in Canada. Findings relating to the latter topic will be published in a separate report.

# Appendix III – Definitions of Smoking Behaviour

The conceptual definitions of smoking behaviour in this report are consistent with previous LFS smoking supplements.

1. Regular smokers are those who reported smoking cigarettes daily.

2. Occasional cigarette smokers smoke cigarettes occasionally (not every day).

3. Ex-regular cigarette smokers are those who reported that they smoked cigarettes regularly in the past but do not at present smoke a pipe, cigarettes or cigars.

4. Former smokers are defined as individuals who ever smoked cigarettes, pipes or cigars but who did not smoke cigarettes, pipes or cigars at the time of the survey.

5. Never smoked refers to respondents who indicated that they had never smoked cigarettes, pipes or cigars.

6. Non-smokers refer to respondents who never smoked or who used to smoke cigarettes, pipes or cigars but are presently not smoking.

7. Smoke only pipe and/or cigar refers to respondents who smoke a pipe and/or cigars but do not smoke cigarettes.

# Appendix IV – Survey Questionnaire

## Access to Microdata Tapes

Researchers are encouraged to conduct more extensive analyses of the LFS data base relating to smoking. Those who wish to do so may purchase microdata tapes and accompanying documentation from:

The Government Archives Division
National Archives of Canada
395 Wellington Street
Ottawa, K1A 0N3
Ontario

There is a nominal charge for the magnetic tape and documentation.

Statistics Canada Statistique Canada

# SURVEY OF SMOKING HABITS 1986

CONFIDENTIAL when completed

Docket no. 2 | Survey date 3 Mo. Yr. | Assignment No. 4

HRD page - line no. 5 | Given name 6 | Surname 7 | 1 FORM NO. 06

10. **Has ... ever smoked cigarettes, cigars or a pipe?**

Yes [1] ☐ No [2] ☐ *Go to 21*

11. **At the present time, does ... smoke a pipe?**

Yes [3] ☐ No [4] ☐ *Go to 13*

12. **At the present time, does ... smoke a pipe regularly** (usually every day) **or occasionally** (not every day)?

Regularly [5] ☐ Occasionally [2] ☐

13. **At the present time, does ... smoke cigars?**

Yes [7] ☐ No [8] ☐ *Go to 15*

14. **At the present time, does ... smoke cigars regularly** (usually every day) **or occasionally** (not every day)?

Regularly [1] ☐ Occasionally [2] ☐

15. **At the present time, does ... smoke cigarettes?**

Yes [3] ☐ No [4] ☐ *Go to 19*

16. **At the present time, does ... smoke cigarettes regularly** (usually every day) **or occasionally** (not every day)?

Regularly [1] ☐ Occasionally [6] ☐

17. **How many cigarettes does ... usually smoke per day?**

*Enter number of cigarettes* ☐

18. **What kind of cigarettes does ... usually smoke?**
(brand, size, filter, non-filter)

*Enter code* ☐ *Go to 21*

19. **Has ... ever smoked cigarettes regularly?**

Yes [1] ☐ No [2] ☐ *Go to 21*

20. **About how many cigarettes did ... usually smoke daily?**

*Enter number of cigarettes* ☐

21. **At the present time, does ... chew tobacco?**
(i.e. a plug or twist of tobacco)

Yes [3] ☐ No [4] ☐

22. **At the present time, does ... use snuff?**
(i.e. a kind of fine cut, moist tobacco generally held in the mouth)

Yes [5] ☐ No [6] ☐

23. **In the following places, do you think smoking should be permitted, only permitted in restricted areas or not permitted at all?**

| | Permitted | Permitted in Restricted Areas | Not Permitted at All | No Opinion |
|---|---|---|---|---|
| In the workplace | 01 ☐ | 02 ☐ | 03 ☐ | 04 ☐ |
| Hospitals | 05 ☐ | 06 ☐ | 07 ☐ | 08 ☐ |
| Restaurants | 09 ☐ | 10 ☐ | 11 ☐ | 12 ☐ |
| Movie theatres | 13 ☐ | 14 ☐ | 15 ☐ | 16 ☐ |
| Inter-city buses | 17 ☐ | 18 ☐ | 19 ☐ | 20 ☐ |
| Trains | 21 ☐ | 22 ☐ | 23 ☐ | 24 ☐ |
| Airplanes | 25 ☐ | 26 ☐ | 27 ☐ | 28 ☐ |
| Government offices | 29 ☐ | 30 ☐ | 31 ☐ | 32 ☐ |
| Stores | 33 ☐ | 34 ☐ | 35 ☐ | 36 ☐ |
| Schools | 37 ☐ | 38 ☐ | 39 ☐ | 40 ☐ |
| Doctors' offices | 41 ☐ | 42 ☐ | 43 ☐ | 44 ☐ |
| Banks | 45 ☐ | 46 ☐ | 47 ☐ | 48 ☐ |

24. **INTERVIEWER CHECK ITEM: FORM 05**

– If "YES" in item 10 or any code but 6 in item 33 . . . . . 1 ☐ *Go to 25*

– Otherwise . . . . . 2 ☐ *Go to 27*

25. **Is smoking permitted in your immediate work area?**
(that is the place where you spend most of your working time)

Yes [3] ☐ No [4] ☐ Don't know [5] ☐

26. **At your place of work, are there areas that are designated as smoking and non-smoking?**

Yes [6] ☐ No [7] ☐ Don't know [8] ☐

27. **Information Source:**

HRD page-Line No. ☐

99 NOTES See over for additional NOTES ☐

Item no. | Item no.

8-5103-5: 10-10-86 STC/HLD-040-02527

*Authority - Statistics Act, Chapter 15, Statutes of Canada 1970 - 71 - 72*

Statistics Canada Statistique Canada

# ENQUÊTE SUR LES HABITUDES DE FUMER 1986

DOCUMENT CONFIDENTIEL une fois rempli

N° de dossier 2 | Date de l'enquête 3 Mo. Yr. | N° de tâche 4

N° de page-ligne du DM. 5 | Prénom 6 | Nom de famille 7 | 1 FORMULE 06

**10. ...a-t-il (elle) déjà fumé la cigarette, le cigare ou la pipe?**

Oui [1] ☐ Non [2] ☐ ***Passez à 21***

**11. À l'heure actuelle,... fume-t-il (elle) la pipe?**

Oui [3] ☐ Non [4] ☐ ***Passez à 13***

**12. À l'heure actuelle,... fume-t-il (elle) la pipe régulièrement** (habituellement tous les jours) **ou seulement à l'occasion** (pas tous les jours)**?**

Régulièrement [5] ☐ À l'occasion [2] ☐

**13. À l'heure actuelle,... fume-t-il (elle) le cigare?**

Oui [7] ☐ Non [8] ☐ ***Passez à 15***

**14. À l'heure actuelle,... fume-t-il (elle) le cigare régulièrement** (habituellement tous les jours) **ou seulement à l'occasion** (pas tous les jours)**?**

Régulièrement [1] ☐ À l'occasion [2] ☐

**15. À l'heure actuelle,... fume-t-il (elle) la cigarette?**

Oui [3] ☐ Non [4] ☐ ***Passez à 19***

**16. À l'heure actuelle,... fume-t-il (elle) la cigarette régulièrement** (habituellement tous les jours) **ou seulement à l'occasion** (pas tous les jours)**?**

Régulièrement [1] ☐ À l'occasion [6] ☐

**17. Combien de cigarettes... fume-t-il (elle) habituellement par jour?**

*Inscrivez le nombre de cigarettes* ☐

**18. Quelle sorte de cigarettes... fume-t-il (elle) habituellement?**
(marque, format, bout filtre, bout uni)

*Inscrivez le code* ☐ ***Passez à 21***

**19. ...a-t-il (elle) déjà fumé la cigarette régulièrement?**

Oui [1] ☐ Non [2] ☐ ***Passez à 21***

**20. Combien de cigarettes... avait-il (elle) l'habitude de fumer par jour?**

Inscrivez le nombre de cigarettes ☐

**21. À l'heure actuelle,... chique-t-il (elle)?**
(c'est-à-dire une chique ou une torsade de tabac)

Oui [3] ☐ Non [4] ☐

**22. À l'heure actuelle,... utilise-t-il (elle) du tabac à priser?**
(c'est-à-dire un tabac découpé très fin et humide que l'on garde généralement dans la bouche)

Oui [5] ☐ Non [9] ☐

**23. En ce qui concerne les endroits suivants, croyez-vous qu'il devrait être permis de fumer, permis de fumer dans les aires réservées aux fumeurs ou interdit de fumer?**

| | Permis | Permis dans aires réservées aux fumeurs | Interdit | Sans opinion |
|---|---|---|---|---|
| En milieu de travail | 01 ☐ | 02 ☐ | 03 ☐ | 04 ☐ |
| Hôpitaux | 05 ☐ | 06 ☐ | 07 ☐ | 08 ☐ |
| Restaurants | 09 ☐ | 10 ☐ | 11 ☐ | 12 ☐ |
| Cinémas | 13 ☐ | 14 ☐ | 15 ☐ | 16 ☐ |
| Autobus interurbains | 17 ☐ | 18 ☐ | 19 ☐ | 20 ☐ |
| Trains | 21 ☐ | 22 ☐ | 23 ☐ | 24 ☐ |
| Avions | 25 ☐ | 26 ☐ | 27 ☐ | 28 ☐ |
| Bureaux de l'adm. pub. | 29 ☐ | 30 ☐ | 31 ☐ | 32 ☐ |
| Magasins | 33 ☐ | 34 ☐ | 35 ☐ | 36 ☐ |
| Écoles | 37 ☐ | 38 ☐ | 39 ☐ | 40 ☐ |
| Cabinets de médecins | 41 ☐ | 42 ☐ | 43 ☐ | 44 ☐ |
| Banques | 45 ☐ | 46 ☐ | 47 ☐ | 48 ☐ |

**24. FORMULE N°5 À L'INTENTION DE L'INTERVIEWER**

– si "OUI" au poste 10 ou un code autre que 6 au poste 33 . . . . . 1 ☐ ***Passez à 25***

– Autrement . . . . . 2 ☐ ***Passez à 27***

**25. Est-il permis de fumer dans votre aire immédiate?**
(c'est-à-dire l'aire de travail où vous passez le plus de temps)

Oui [3] ☐ Non [4] ☐ Ne sait pas [5] ☐

**26. Dans votre milieu de travail, y a-t-il des aires où il est permis de fumer et d'autres, pas?**

Oui [6] ☐ Non [7] ☐ Ne sait pas [8] ☐

**27. Source de renseignements:**

N° de page - ligne du DM ☐

99 NOTES

Servez-vous du verso pour NOTES supplémentaires ☐

N° de poste

N° de poste

8-5103-5: 10-10-88 STC/HLD-040-02627

*Déclaration exigée en vertu de la Loi sur la statistique, chapitre 15, Statuts du Canada 1970-71-72*